



LA RECHERCHE COLLABORATIVE AU SERVICE DES PATIENTS

LIVRET 2020





Chers amis,

Notre Groupe d'Études Multicentriques (GEM) Resopso est devenu à présent le GEM Reso, du fait de la recherche dynamique au sein de nos réseaux, non seulement sur le psoriasis, mais aussi la dermatite atopique et la maladie de Verneuil, qui génère un nombre toujours plus grand d'études comme l'atteste notre livret 2020.

L'objectif, depuis 9 ans déjà, est de répondre à des questions pratiques concernant aussi bien les aspects épidémiologiques, cliniques et thérapeutiques posés par ces maladies, que leur évolution dans le temps, les comorbidités qui leur sont associées, l'environnement des patients et les difficultés rencontrées dans leur parcours de soin. En connaissant mieux ces maladies inflammatoires chroniques de la peau et les problèmes qu'elles posent, nous pouvons améliorer leur prise en charge, au profit de nos patients.

Notre GEM Reso a été très actif et réactif, dès le début de l'infection Covid-19, comme en attestent nos études CORE et Reso Covid, publiées respectivement cette année dans le JEADV et Acta. Nous avons pu notamment contribuer à préciser le risque représenté par les traitements systémiques et biothérapies vis-à-vis de la pandémie actuelle et accompagner les décisions thérapeutiques des dermatologues dans la prise en charge de nos patients souffrant de dermatoses inflammatoires chroniques.

Un grand merci à tous nos membres qui se sont fortement mobilisés autour de nos études, comme le montrent nos enquêtes de pratiques DATE sur les traitements systémiques de la Dermatite Atopique et ResoCovid : vous avez été plus de 300 à répondre à chacune de ces deux études ! Au-delà du dynamisme du GEM, c'est un pari réussi de permettre depuis bientôt 10 ans à tout dermatologue qui le souhaite de participer à l'effort de recherche au sein de Reso.

Enfin un merci renouvelé à Emmanuel Mahé qui a donné l'impulsion de la recherche au sein de Resopso, et à Anne-Claire Fougousse, actuelle coordinatrice scientifique du GEM, qui ne ménage pas ses efforts pour développer et coordonner la recherche au sein de Reso.

Même si cette année notre réunion GEM annuelle à l'occasion des JDP se fera au format digital du fait des mesures sanitaires, je vous souhaite une bonne lecture de notre livret synthétique qui reprend l'ensemble de nos travaux et je ne doute pas de vous retrouver en présentiel l'an prochain pour fêter les dix ans de notre Groupe de Recherche !

Amitiés à tous

François Maccari
Président de Reso

SOMMAIRE

Etudes en cours.....	4
Etudes en projet.....	5
Etudes à valoriser.....	7
Etudes abouties.....	14
Publications.....	19
Présentation à des congrès 2020.....	41
L'article à ne pas manquer.....	50
Thèse 2020.....	51
Synthèse des communications et articles au sein de Reso.....	52



ETUDES EN COURS

RELEVÉ : RÉCIDIVE LOCALE APRÈS EXCISION CHIRURGICALE DE LA MALADIE DE VERNEUIL



Investigateurs principaux :
Drs Anne-Cécile Ezanno et Philippe Guillem

Nombre de patients inclus : 13

Nombre de contres participants : 2

Objectif : Evaluer le taux de récurrence après excision chirurgicale selon le traitement péri-opératoire (antibiothérapie ; biothérapie...). Evaluer le taux de récurrence selon le type d'excision réalisée. Evaluer le temps de cicatrisation selon la technique de cicatrisation. Evaluer satisfaction/ qualité de vie avant et après l'excision.

ENQUÊTE DE PRATIQUE SUR L'UTILISATION DU MÉTHOTREXATE DANS LE TRAITEMENT DU PSORIASIS EN PLAQUE MODÉRÉ À SÉVÈRE



Investigateurs principaux :
Drs Anne-Claire Fougerousse, François Maccari,
Laure Mery-Bossard, Josiane Parier

ENQUETE DE PRATIQUE
204 dermatologues ayant déjà
répondu au questionnaire

Objectif : Décrire les pratiques de prise en charge des patients adultes traités par MTX pour un psoriasis en plaque modéré à sévère auprès des dermatologues exerçant en ville, à l'hôpital ou en pratique mixte.

ETUDES EN PROJET

ENQUÊTE DE PRATIQUE SUR L'ANTIBIOTHÉRAPIE DANS LA MALADIE DE VERNEUIL



Investigateurs :

Drs Anne-Claire Fougerousse,
Ziad Reguiat

ENQUETE DE PRATIQUE

Prévue debut 2021

Objectif : Décrire les modalités de traitements par antibiotiques au cours de la maladie de Verneuil selon le stade de Hurley

CANCER-BIO



Investigateurs :

Drs Anne-Claire Fougerousse,
Laure Mery-Bossard

APPEL À CAS

Objectif : Décrire la tolérance et l'efficacité des biothérapies ou de l'apremilast à partir d'une série de patients atteints de psoriasis ayant des antécédents de cancer solide en rémission ou évolutif

En attente de retour des formalités administratives (dépôt étude MR004)

ENQUÊTE DE PRATIQUES SUR L'UTILISATION DES RÉTINOÏDES DANS LA MALADIE DE VERNEUIL



Investigateurs :
Drs Charlotte Fite
Germaine Gabison

ENQUETE DE PRATIQUE

Objectif : Décrire les modalités de prescription des rétinoïdes dans la maladie de Verneuil

ETUDES À VALORISER

PSORIASIS

• SKIN CAT



Investigateur principal : Dr Edouard Begon

Objectif : Création d'un questionnaire patient à type d'échelle de quantification visant à évaluer le fardeau du traitement (Treatment burden) / les contraintes liées au traitement (CAT ou Contraintes Associées aux Traitements) chez les patients psoriasiques en France

Communications

Journées Dermatologiques de Paris 2019

Première échelle d'évaluation des contraintes associées aux traitements dans le psoriasis : le questionnaire SKIN-CAT (SKIN- Contraintes Associées aux Traitements).

Edouard BEGON, Nathalie Beneton, Emmanuel MAHE, Anne-Claire FOUGEROUSSE, Jean Luc PERROT, Domitille THOMAS BEAULIEU, Josiane PARIER, Marc Perrussel, Laure Mery Bossard, Diane Pourchot, Catherine Goujon, Caroline Jacobzone, Anne Caroline Cottencin, Juliette Delaunay, Helene Aubert, Anne Benedicte Duval Modeste, Nathalie Quiles, Claire Boulard, Annie Vermersch Langlin, Pierre Pfister, Michele Zeitoun, François Maccari, Laurent Wagner, Bruno Halioua, Chantal Rousseaux, Marc Marty, Hugues Barthelemy, Alain Beauchet et GEM RESOPSO

ETUDE TERMINÉE

Nombre de patients inclus : 241

Nombre de centres participant : 23

• SWITCH ANTI IL17



Investigateur principal :
Dr Anne-Claire Fougerousse

Objectif : Analyser la réponse terme (efficacité et tolérance) à court (3 mois) et long (12 mois) chez les patients ayant reçu plusieurs anti IL- 17, en switch immédiat ou « décalé ».

Communications

World Congress of Dermatology 2019 Milan

Switch between interleukine-17A antagonists for psoriasis : a french multicentric retrospective experience.

A.-C. Fougerousse, C Boulard, Z Reguicai, L Mery-Bossard, H Barthelemy, E Begon, F Maccari, C Girard, C . Jacobzone, J Parier, J-B Monfort, D Lons-Danic, , N Sultan, A-C Cottencin, E. Mahé , for the GEM Resopso

ETUDE TERMINÉE

Nombre de patients inclus : 100

Nombre de centres participants : 21

Journées Dermatologiques de Paris 2019

Switch entre anti IL17 pour du psoriasis: étude rétrospective multicentrique

Anne-Claire Fougerousse, Ziad Reguiai, Claire Boulard, Edouard Begon, Nathalie Beneton, Guillaume Chaby, Juliette Delaunay, Hughes Barthelemy, Josiane Parier, Laure Mery Bossard, François Maccari, Marie Bastien, Dominique Lons Danic, Jean-Luc Perrot, Caroline Jacobzone, Nathalie Sultan, Anne-Caroline Cottencin, Mahtab Samimi, Jean-Benoît Monfort, Emanuele Trovato, Emmanuel Mahe et pour le GEM Resopso

• APREPSO



Investigateur principal :
Dr Anne-Claire Fougerousse

Objectif : Evaluer la tolérance du traitement par Otezla® après sa prescription initiale chez des patients adultes atteints de psoriasis en plaques chronique modéré à sévère, en conditions réelles de prescription en France

Communications

World Congress of Dermatology 2019 Milan

Profile of the patients treated by apremilast in a prospective non-interventional, descriptive, multicenter study in France: first results.

A.-C. Fougerousse, D. Bouilly-Auvray, M. Bastien, R. Safar, C. Girard, E. Begon, M. Perrussel, M. Zeitoun, J.-B. Monfort, C. Jacobzone, P. Pfister, E. Mahé, V. Pallure, D. Thomas-Beaulieu, B. Solyga, F. Maccari, for the GEM Resopso

INCLUSIONS TERMINÉES

Nombre de patients inclus : 229

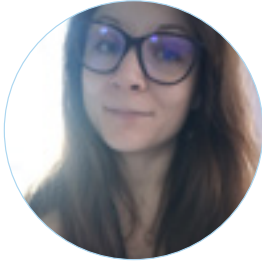
Nombre de centres participant : 27

Journées Dermatologiques de Paris 2019

Evaluation de l'utilisation de l'apremilast dans la prise en charge du psoriasis en plaques chronique modéré à sévère chez l'adulte en pratique courante en France: résultats à 4 mois d'une étude prospective multicentrique

Anne-Claire Fougerousse, Danielle Bouilly-Auvray, Marie Bastien, Ziad Reguiai, Josiane Parier, Edouard Begon, Valérie Pallure, Nathalie Beneton, Jean-Benoît Monfort, Claire Boulard, Juliette Delaunay, Laure Mery Bossard, Caroline Jacobzone, Emmanuel Mahe, Céline Girard, Catherine Goujon, Mathilde Kemula, Marc Perrussel, Pierre Pfister, Bénédicte Solyga, Michele Zeitoun, Maud Steff, Domitille Thomas-Beaulieu, Nihal Bekkali, Eric Esteve, François Maccari pour le GEM Resopso

• ENQUÊTE DE PRATIQUE : GESTION DES DIARRHÉES SOUS APREMILAST



Coordinateurs : Chloé Venuto (interne en dermatologie au CHU d'Angers) avec le Dr Hervé Maillard

ETUDE TERMINEE

ENQUETE DE PRATIQUE

165 dermatologues ayant participé

Objectif :

Etablir une conduite à tenir concernant la gestion des diarrhées sous APREMILAST à l'aide d'un questionnaire en ligne à destinée des dermatologues.

• E BIP



Investigateur principal :
Dr Hélène Aubert

Objectif : Evaluer les stratégies d'adaptation des doses des biothérapies lors de l'obtention de la rémission du psoriasis

Communications

Journées dermatologiques de Paris 2019

Stratégie d'espacement et de diminution des doses de traitement par biothérapie dans le psoriasis cutané en rémission ou avec une faible activité : enquête de pratique

Helene Aubert, Emmanuel MAHE, Anne-Claire FOUGEROUSSE, François Maccari, Nathalie BENETON

Soumis aux Annales de Dermatologie et de Vénérologie

ETUDE TERMINÉE

ENQUÊTE DE PRATIQUE

54 dermatologues ayant participé

• HÉMOPATHIES ET BIOTHÉRAPIE



Investigateur principal :
Dr Guillaume Chaby

Objectif : Décrire de l'efficacité et de la tolérance des biothérapies ou de l'apremilast à partir d'une série de patients atteints de psoriasis ayant des antécédents d'hémopathie maligne en rémission ou évolutive

Appel à cas

ETUDE TERMINÉE

Nombre de patients inclus : 21

Nombre de contres participants : 8

• DAPHNE



Investigateurs principaux :

Drs Caroline Jacobzone et Sébastien Barbarot

Objectif : Etudier la répartition des formes phénotypiques de dermatite atopique de l'adulte en recueillant les données cliniques et épidémiologiques chez tous les patients adultes vus en consultation.

Décrire les modalités d'utilisation des traitements systémiques chez ces patients.

Communications

Journées Dermatologiques de Paris 2019

REPARTITION DES FORMES PHENOTYPIQUES DE LA DERMATITE ATOPIQUE CHEZ L'ADULTE PREMIERS RESULTATS DE L'ETUDE DAPHNE

Caroline Jacobzone, Ziad Reguiai, Anne Claire Fougrousse, Emmanuel Mahé, François Maccari, Antoine Badaoui, Jean-Luc Perrot, Eric Esteve, Domitille Thomas Beaulieu, Edouard Begon, Juliette Delaunay, Michelle Pillette Delarue, Marie

Jachiet, Nicole Jouan, Valérie Pallure, Jeffrey Loget, Magali Bourrel, Nathalie Beneton, Maud Steff, Paul Bilan, Flavien Huet, Josiane Parier, Claire Alice de Salins, Sophie Osdoit, Germaine Gabison, Marc Perrussel, Charlotte Lepelley-Dupont, Nathalie Sultan, Charles Taieb, Sébastien Barbarot et Resoeczema

INCLUSIONS TERMINEES

Centres sollicités : tous les membres de ResoEczema

Nombre de patients inclus : 809

Nombre de centres participant : 28

• DATE : UTILISATION DES TRAITEMENTS SYSTEMIQUES DANS LA DERMATITE ATOPIQUE DE L'ADULTE



ETUDE TERMINEE

ENQUETE DE PRATIQUE

305 dermatologues ayant participé

Investigateurs principaux :

Drs Anne-Claire Fougrousse, Caroline Jacobzone, François Maccari

Objectif : Décrire l'utilisation des traitements systémiques dans la dermatite atopique de l'adulte en France

Communication EADV 2020 Vienne

Use of systemic medications in adult atopic dermatitis in France, results of a practice survey

Anne-Claire Fougerousse, Caroline Jacobzone, Laure Mery Bossard, Ziad Reguiai, Catherine Droitcourt, François Maccari, for the GEM ResoEczema

JDP 2020

Utilisation des traitements systémiques dans la dermatite atopique de l'adulte: enquête de pratiques

Anne-Claire Fougerousse, Caroline Jacobzone, Laure Mery Bossard, Ziad Reguiai, Catherine Droitcourt, François Maccari, for the GEM ResoEczema

Soumis aux Annales de Dermatologie et de Vénérologie

MALADIE DE VERNEUIL

• EPIVER



Investigateur principal :

Pr Jean-Luc Perrot

Objectif : Permettre une meilleure connaissance des malades français atteints d'une maladie de Verneuil en précisant leurs antécédents inflammatoires et cardiovasculaires personnels et familiaux, leurs expositions aux toxiques, leur profil démographique et phénotypique, l'étude de leur qualité de vie, le ressenti de la douleur

Communications

Journées dermatologiques de Paris 2017

Données démographiques et biométriques de 882 sujets atteints de maladie de Verneuil : EpiVer étude multicentrique française ville-hôpital

S Allal, P Guillem, AC Fougerousse, N Beneton, F Maccari, B Labeille, E Tisserand, F Vuering, S Vergote-Pelamourgues, E Cinotti, JL Perrot, ResoVerneuil

Ressenti des patients atteints de maladie de Verneuil à propos de 882 sujets EpiVer étude multicentrique française ville-hôpital

S Allal, P Guillem, AC Fougerousse, N Beneton, F Maccari, C Girard, I Kupfer, V beraud, A Brams, T Bonnefoy, E Cinotti, JL Perrot, ResoVerneuil

Descriptif des sites atteints par la maladie de Verneuil à propos de 882 sujets EpiVer étude multicentrique française ville-hôpital.

JL Perrot, P Zuckervar, M Salavert, J Parier, JL Michel, JP Barrachin, P Guillem, E Cinotti, B Labeille, ResoVerneuil

Addictions au tabac et ou au cannabis et maladie de Verneuil EpiVer étude multicentrique française ville-hôpital

S Allal, P Guillem, AC Fougerousse, C Girard, C Fite, J Gand-Gavanou, N Quiles, E Cinotti, JL Perrot, ResoVerneuil

Antécédents personnels et familiaux de 882 sujets atteints de maladie de Verneuil étude EpiVer

P Guillem, S Allal, AC Fougerousse, N Beneton, F Maccari, B Labeille, E Tisserand, F Vuering, S Vergote-Pelamourgues, E Cinotti, JL Perrot, ResoVerneuil

ETUDE TERMINÉE

Nombre de patients inclus : 1428

Influence de l'ancienneté de la maladie de Verneuil sur la qualité de vie et la douleur à propos de 1428 sujets : étude EpiVer

AC Fougousse, P Guillem, S Allal, F Maccari, N Beneton, R Binois, E Cinotti, F Cambazard, JL Perrot, ResoVerneuil

Tabagisme et sévérité de la maladie de Verneuil : à propos de 1428 sujets : étude EpiVer

E Ravni, F Cambazard, AC Biron, C Couzan, E Couty, JL Perrot, ResoVerneuil

Modalités de prise en charge thérapeutique de 1428 sujets atteints de maladie de Verneuil : étude EpiVer study

Z Reguiat, C Jacobzone, E Tisserand, E Esteve, A Nassif, A Duval Modeste, P Bravard, T Boyé, N Sultan, E Cinotti, JL Perrot, ResoVerneuil

EHSF 2019 Wrocław : Posters

Influence of the duration of Hidradenitis Suppurativa on the quality of life and pain in 1428 subjects: EpiVer study

AC Fougousse, S Allal, G Tonini, Ph Guillem, F Maccari, N Beneton, R Binois, C Fite, E Cinotti, P Rubegni, JL Perrot

Is severity of Hidradenitis Suppurativa related to hypertension and angina pectoris ? EpiVer study on 1428 subjects

AC Fougousse, S Allal, G Tonini, Ph Guillem, F Maccari, N Beneton, R Binois, C Fite, E Cinotti, P Rubegni, JL Perrot

Demographic and biometric data of 1428 patients with Hidradenitis suppurativa: EpiVer French multicenter study

AC Fougousse, S Allal, G Tonini, Ph Guillem, F Maccari, N Beneton, R Binois, C Fite, E Cinotti, P Rubegni, JL Perrot

Personal and family history of 1428 subjects with Hidradenitis Suppurativa: EpiVer study

Z Reguiat, C Jacobzone, E Tisserand, AB Duval Modeste, P Bravard, T Boyé, N Sultan Bichat, A Nassif, E Cinotti, P Rubegni, JL Perrot

Therapeutic management of 1428 subjects suffering from Hidradenitis Suppurativa: EpiVer study

Z Reguiat, C Jacobzone, E Tisserand, AB Duval Modeste, P Bravard, T Boyé, N Sultan Bichat, A Nassif, E Cinotti, P Rubegni, JL Perrot

• **RESOVERNEUIL.NET**



Investigateur principal :

Dr Anne-Claire Fougousse

Objectifs :

• Décrire les caractéristiques des patients atteints de maladie de Verneuil consultant internet, de décrire le contexte et l'impact de ces recherches sur le comportement des patients

• Analyser les sites les plus visités (critères de qualité des sites, qualité de l'information)

Inclusions en cours

Inclusions terminées

Centres sollicités : tous les membres de ResoVerneuil

Nombre de patients inclus : 501

Nombre de centres participant : 28

Communications

EHSF 2020 Athenes

Use of internet by hidradenitis suppurativa's patients: an observationnal study, Resoverneuil.net

Anne-Claire Fougrousse, Ziad Reguiai, Germaine Gabison, Nathalie Beneton, Juliette Delaunay, Jean-Luc Perrot, Anne-Cécile Ezanno, Marie Bastien, Valérie Pallure, François Maccari, Philippe Guillem for the GEM ResoVerneuil

EADV 2020 Vienne

Use of internet by hidradenitis suppurativa's patients: an observationnal study, Resoverneuil.net

Anne-Claire Fougrousse, Ziad Reguiai, Germaine Gabison, Nathalie Beneton, Juliette Delaunay, Jean-Luc Perrot, Anne-Cécile Ezanno, Marie Bastien, Valérie Pallure, François Maccari, Philippe Guillem for the GEM ResoVerneuil

URTICAIRE

• OMALIZUMAB ET GROSSESSE



Investigateur principal :

Dr Antoine Badaoui
Etude collaborative avec
le GUS

APPEL À CAS

Nombre de patients inclus : 12

Nombre de contres participants : 5

Objectif : Evaluer la tolérance et l'efficacité de l'omalizumab au cours de la grossesse

• MODIFICATION DE L'EQUILIBRE THYROIDIEN SOUS OMALIZUMAB



Investigateurs principaux :

Drs Anne-Claire Fougrousse,
Angèle Soria
Etude collaborative avec le GUS

Objectif : Colliger les cas de patients ayant vu leurs besoins en hormones thyroïdiennes diminuer après l'introduction de l'omalizumab.

APPEL À CAS

Nombre de patients inclus : 2

Nombre de contres participants : 2

Communication EADV 2020

Decrease thyroid hormones needs after introduction of omalizumab in patients with chronic spontaneous urticaria and non auto-immune hypothyroidism

Anne-Claire Fougrousse, Angèle Soria

PSORIASIS

• CORE

Systemic or biologic treatment in psoriasis patients does not increase the risk of a severe form of COVID-19

Fougerousse AC, Perrussel M, Bécherel PA, Begon E, Pallure V, Zarea I, Chaby G, Parier J, Kemula M, Mery-Bossard L, Poreaux C, Taieb C, Maccari F, Reguiat Z, GEM Resopso. [published online ahead of print, 2020 Jun 21]. *J Eur Acad Dermatol Venereol*. 2020;10.1111/jdv.16761. doi:10.1111/jdv.16761

• ResoCOVID

Impact of the COVID-19 Pandemic on Chronic Inflammatory Dermatoses: Mixed Messages Regarding the Dermatologist's Point of View and the Patient's Concerns

Fougerousse AC, Maccari F, Reguiat Z, Begon E, Pallure V, Taieb C, Girard C, Mery-Bossard L. *Impact of the COVID-19 Pandemic on Chronic Inflammatory Dermatoses: Mixed Messages Regarding the Dermatologist's Point of View and the Patient's Concerns*. *Acta Derm Venereol*. 2020 Aug 18;100(15):adv00248. doi: 10.2340/00015555-3610. PMID: 32735023.

L'article a été sélectionné comme l'article du mois en août 2020.

Editors' Choice in August 2020 in Acta Dermato-Venereologica:

Impact of the COVID-19 Pandemic on Chronic Inflammatory Dermatoses: Mixed Messages Regarding the Dermatologist's Point of View and the Patient's Concerns

Anne-Claire Fougerousse, François Maccari, Ziad Reguiat, Edouard Begon, Valérie Pallure, Charles Taieb, Céline Girard, Laure Mery-Bossard; for the GEM Resopso Association



Comments by the authors:

Reso is a network of physicians, mostly dermatologists, specialized in chronic inflammatory dermatosis. We wanted to perform this study in order to evaluate the perception of the COVID-19 pandemic by dermatologists and patients suffering from chronic inflammatory dermatosis. This unique phenomenon has led to sudden and major modifications in the way physicians manage their patients, rapid development of online consultations, concerns about safety of immunomodulatory and biological treatments, needs for more relevant information for the patients, etc. Strategies for providing updated information have been digital including webinars for patients, information letters for dermatologists, etc. [Read more](#)

• PROFIL GUSEL

Effectiveness and short-term (16-week) tolerance of guselkumab for psoriasis under real-life conditions: a retrospective multicenter study

Fougerousse AC, Ghislain PD, Reguiat Z, Maccari F, Parier J, Bouilly Auvray D, Chaby G, Pallure V, Schmutz JL, Clément C, Jacobzone C, Begon E, Esteve E; GEM ResoPso.

Communication

Journées Dermatologiques de Paris 2019

Profil des patients à l'initiation du guselkumab: étude rétrospective multicentrique

Anne-Claire Fougerousse, Ziad Reguiat, François Maccari, Josiane Parier, Jean-Luc Schmutz, Edouard Begon, Guillaume Chaby, Danielle Bouilly-Auvray, Valérie Pallure, Nathalie Beneton, Jean-Benoit Monfort, Claire Boulard, Juliette Delaunay, Cécile Clément Lepley, Marie Bastien, Laure Mery Bossard, Jean-Luc Perrot, Caroline Jacobzone, Annie Vermersch, Eric Esteve, pour le GEM Resopso

• FAMILYPSO

Impact of patients psoriasis on partner quality of life, sexuality and empathy feelings : a study in 183 couples

Halioua B, Maccari F, Fougerousse AC, Parier J, Reguiat Z, Taieb C, Esteve E. *Impact of patient psoriasis on partner quality of life, sexuality and empathy feelings: a study in 183 couples*. *J Eur Acad Dermatol Venereol*. 2020 Mar 15. doi: 10.1111/jdv.16270. Epub ahead of print. PMID: 32173921.

Communications

World Congress of dermatology 2019

Assessment of psoriasis impact on the partners of patients using the Familypsos questionnaire. B Halioua, F Maccari, AC Fougerousse, J Parier, Z Reguiat, C Taieb, E Esteve, Resorecherche

Study of empathy among the partners of psoriasis patients.

B Halioua, F Maccari, AC Fougerousse, J Parier, Z Reguiat, C Taieb, E Esteve, Resorecherche

Journées Dermatologiques de Paris 2018

Evaluation du retentissement du psoriasis chez les conjoints à l'aide de Familypso

B Halioua, F Maccari, AC Fougerousse, J Parier, Z Reguiat, C Taieb, E Esteve, Resorecherche

Dysfonctionnements sexuels chez le conjoint de patients souffrant de psoriasis

(B Halioua, F Maccari, AC Fougerousse, J Parier, Z Reguiat, C Taieb, E Esteve, Resorecherche)

Evaluation de l'empathie des conjoints des patients souffrant de psoriasis

B Halioua, F Maccari, AC Fougerousse, J Parier, Z Reguiat, C Taieb, E Esteve, ResoRecherche

• IBOP

Individual Burden of Psoriasis (I-BOP): Building and Validation of a New Scoring Tool for Patients with Psoriasis.

Ezzedine K, Fougerousse AC, Aubert R, Monfort JB, Reguiat Z, Shourick J, Maccari F. Clin Cosmet Investig Dermatol. 2020;13:325332. doi:10.2147/CCID.S249776

Communications

AAD 2019, World Congress of Dermatology

Individual burden of psoriasis (IBOP) construction and validation of a new score

Khaled Ezzedine, François Maccari, Anne Claire Fougerousse, Jean-Benoît Monfort, Ziad Reguiat, Jason Shourick, Charles Taieb

• ELDERLY

Real-World Effectiveness and Safety of Apremilast in Older Patients with Psoriasis

Phan C, Beneton N, Delaunay J, Reguiat Z, Boulard C, Fougerousse AC, Cinotti E, Romanelli M, Mery-Bossard L, Thomas-Beaulieu D, Parier J, Maccari F, Chaby G, Bastien M, Begon E, Samimi M, Prignano F, Beauchet A, Mahé E; GEM Resopso. Drugs Aging. 2020 Sep;37(9):657-663.

Efficacy and safety of interleukine-17 biotherapies in elderly patients with psoriasis.

Phan C, Beneton N, Delaunay J, Reguiat Z, Boulard C, Fougerousse AC, Cinotti E, Romanelli M, Mery-Bossard L, Thomas-Beaulieu D, Parier J, Maccari F, Perrot JL, Ruer-Mulard M, Bastien M, Begon E, Samimi M, Jacobzone C, Quiles-Tsamaratos N, Descamps V, Steff M, Bilan P, Vermersch-Langlin A, Kemula M, Amazan E, Kupfer-Bessaguet I, Cottencin AC, Prignano F, Livideanu B, Gottlieb J, Beauchet A, Mahé E; the Groupe d'Etudes Multicentriques (GEM) RESOPSO. Effectiveness and Safety of Anti-interleukin-17 Therapies in Elderly Patients with Psoriasis. Acta Derm Venereol. 2020 Nov 4;100(18):adv00316. doi: 10.2340/00015555-3678. PMID: 33111960.

Communications

Journées Dermatologiques de Paris 2019

Tolérance et efficacité de l'apremilast chez les patients psoriasiques de plus de 65 ans

Céline Phan, Juliette Delaunay, Nathalie Beneton, Ziad Reguiat, Claire Boulard, Anne Claire Fougerousse, Elisa Cinotti, Marco Romanelli, Laure Mery-Bossard, Domitille Thomas-Beaulieu, Josiane Parier, Jean-Luc Perrot, Mireille Ruer-Mulard, Marie Bastien, Edouard Begon, Mahtab Samimi, Caroline Jacobzone, Nathalie Quiles-Tsamaratos, Vincent Descamps, Maud Steff, Paul Bilan, Annie Vermersch-Langlin, Mathilde Kemula, Emmanuelle Amazan, Ingrid Kupfer-Bessaguet, Anne-Caroline Cottencin, Francesca Prignano, Cristina Livideanu, Jeremy Gottlieb, Alain Beauchet, Emmanuel Mahé et GEM Resopso

Journées Dermatologiques de Paris 2019

Tolérance et efficacité des anti-IL17 chez les patients psoriasiques de plus de 65 ans.

Céline Phan, Juliette Delaunay, Nathalie Beneton, Ziad Reguiat, Claire Boulard, Anne Claire Fougerousse, Elisa Cinotti, Marco Romanelli, Laure Mery-Bossard, Domitille Thomas-Beaulieu, Josiane Parier, Jean-Luc Perrot, Mireille Ruer-Mulard, Marie Bastien, Edouard Begon, Mahtab Samimi, Caroline Jacobzone, Nathalie Quiles-Tsamaratos, Vincent Descamps, Maud Steff, Paul Bilan, Annie Vermersch-Langlin, Mathilde Kemula, Emmanuelle Amazan, Ingrid Kupfer-Bessaguet, Anne-Caroline Cottencin, Francesca Prignano, Cristina Livideanu, Jeremy Gottlieb, Alain Beauchet, Emmanuel Mahé et GEM Resopso

TATOU

• TATOU 1

Tattoo complications in treated and non-treated patients

Grodner C, Beauchet A, Fougerousse AC, Quiles-Tsimaratos N, Perrot JL, Barthelemy H, Parier J, Maccari F, Beneton N, Bouilly-Auvray D, Ruer-Mulard M, Boulard C, Jacobzone C, Thomas-Beaulieu D, Pourchot D, Méry-Bossard L, Chaby G, Girard C, Duval-Modeste AB, Vermersch-Langlin A, Delaunay J, Marc S, Kemula M, Steff M, Bilan P, Liégeon AL, Aubert H, Solyga B, Kluger N, Mahé E; GEM Resopso, J Eur Acad Dermatol Venereol. 2020 Apr;34(4):888-896

• TATOU 2

Tattooing and psoriasis: dermatologists' knowledge, attitudes and practices an international study

Grodner C, Kluger N, Fougerousse AC, Cinotti E, Lacarrubba F, Quiles-Tsimaratos N, Mahé E; GEM Resopso. J Eur Acad Dermatol Venereol. 2019 Jan;33(1):e38-e40.

• TATOU 3

Déterminants de la réticence des dermatologues vis-à-vis du tatouage chez les patients atteints de psoriasis.

Grodner C, Beauchet A, Kluger N, Fougerousse AC, Cinotti E, Lacarrubba F, Amy de la Bretèque M, Quiles-Tsimaratos N, Mahé E; GEM Resopso. Déterminants de la réticence des dermatologues vis-à-vis du tatouage chez les patients atteints de psoriasis. Une étude internationale [Reluctance determinants of dermatologists about tattooing in patients with psoriasis. An international study]. Ann Dermatol Venereol. 2020 Sep 4;S0151-9638(20)30306-9. French. doi: 10.1016/j.annder.2020.07.008. Epub ahead of print. PMID: 32896422.

Communications

Journées Dermatologiques de Paris 2019

Complications des tatouages chez les patients psoriasiques avec ou sans traitements

Camille Grodner, Alain Beauchet, Anne-Claire Fougerousse, Nathalie Quiles-Tsimaratos, Jean-Luc Perrot, Hugues Barthelemy, Josiane Parier, François Maccari, Nathalie Beneton, Danielle Bouilly-Auvray, Mireille Ruer-Mulard, Claire Boulard, Caroline Jacobzone, Domitille Thomas-Beaulieu, Laure Méry-Bossard, Diane Pourchot, Guillaume Chaby, Céline Girard, Anne-Bénédicte Duval-Modeste, Annie Vermersch-Langlin, Juliette Delaunay, Siham Marc, Mathilde Kemula, Michèle-Léa Sigal, Maud Amy de la Breteque, Maud Steff, Paul Bilan, Anne-Laure Liégeon, Hélène Aubert, Bénédicte Solyga, Nicolas Kluger Emmanuel Mahé et GEM Resopso

Journées Dermatologiques de Paris 2018

Tatouages et psoriasis : enquête internationale de pratiques aupres des dermatologues

Grodner C, Kluger N, Fougerousse AC, Cinotti E, Beauchet A, Quiles-Tsimaratos N, Mahé E, et le GEM Resopso

• R-ENS

Do psoriasis patients seen in private practice differ from those seen in hospitals ?

Amy de la Bretèque M, Beauchet A, Maccari F, Ruer-Mulard M, Bastien M, Chaby G, Le Guyadec T, Estève E, Parier J, Dauendorffer JN, Barthelemy H, Généer G, Wagner L, Pfister P, Bégon E, Mery-Bossard L, Schmutz JL, Mahé E; GEM Resopso. Les patients psoriasiques vus en cabinet libéral et à l'hôpital sont-ils différents ? [Do psoriasis patients seen in private practice differ from those seen in hospitals?]. Ann Dermatol Venereol. 2020 Apr;147(4):310-312. French. doi: 10.1016/j.annder.2019.12.008. Epub 2020 Jan 15. PMID: 31952953.

Characteristics of patients with plaque psoriasis who have discordance between PASI and DLQI scores.

Amy de la Bretèque M, Sigal ML, Reguiat Z, Maccari F, Ruer-Mulard M, Le Guyadec T, Estève E, Goujon-Henry C, Chaby G, Barthelemy H, Parier J, Steiner HG, Begon E, Maillard H, Bastien M, Beauchet A, Mahé E GEM Resopso J Eur Acad Dermatol Venereol 2017;31:e269-72

Socioeconomic inequalities and severity of plaque psoriasis at a first consultation in dermatology centers?

Mahé E, Beauchet A, Reguiat Z, Maccari F, Ruer-Mulard M, Chaby G, Le Guyadec T, Estève E, Goujon-Henry C, Parier J, Barthelemy H, Begon E, Steiner HG, Beneton N, Boyé T, Mery-Bossard L, Schmutz JL, Bravard P, Sigal ML and GEM Resopso Acta Derm Venereol 2017;97:632-8

Patients atteints de psoriasis: analyse de la population insatisfaite de sa prise en charge.

Mahé E, Maccari F, Beauchet A, Quiles-Tsimaratos N, beneton N, Parier J, Barthelemy H, Goujon-Henry C, Chaby G, Thomas-Beaulieu D, Genr G, Wagnr L, Pallure V, Devaux S, Vermersch-Langlin A, Pfister P, Jegou J, Livedeanu C, Sigal ML, pour le GEM Resopso. Ann Dermatol Venereol 2017 ;144 :497-507

Communications

Journées dermatologiques de Paris 2013

11th EADV Spring Symposium, Belgrade, Serbie ;

Journées Dermatologiques de Paris 2014,

15th EADV Spring Symposium, Budva, Montenegro 2018.

• PSOLIB, BIPE, XI-PSOCAR

Prescriptions hors AMM (autorisation de mise sur le marché) dans le psoriasis de l'enfant.

Mahé E, Corgibet F, Phan C, Maccari F, Hadj-Rabia S, Ruer-Mulard M, Boralevi F, Barbarot S, Bursztejn AC, Lahfa M, Severino-Freire M, Aubin F, Barthelemy H, Amy de la Breteque M, Beauchet A, pour le Groupe de Recherche de la Société Française de Dermatologie Pédiatrique, le Groupe de Recherche sur le Psoriasis de la Société Française de Dermatologie, la Fédération Française de Formation Continue et d'Évaluation en Dermatologie-Vénérologie, et le GEM Resopso. Prescriptions hors AMM (autorisation de mise sur le marché) dans le psoriasis de l'enfant. *Ann Dermatol Venereol* 2020;147:429-38.

• OPTIPSO

Perception of therapeutic inertia by patients with psoriasis in France.

Halioua B, Zetlaoui J, Pain E, Testa D, Radoszycki L. *Int J Dermatol*. 2020 May 5. doi: 10.1111/ijd.14914

Therapeutic inertia in the management of moderate-to-severe plaque psoriasis.

Halioua B, Corgibet F, Maghia R, Hello S, Caillet G, Nicolas C, Riboulet JL, Mahé E. *J Eur Acad Dermatol Venereol*. 2020 Jan;34(1):e30-e32. doi: 10.1111/jdv.15882. Epub 2019 Sep 2.

• AUTRES PUBLICATIONS

Utilisation d'une biothérapie pour du psoriasis chez un patient atteint de syndrome de Cohen

Fougerousse AC. Utilisation d'une biothérapie pour du psoriasis chez un patient atteint de syndrome de Cohen [Use of biotherapy for psoriasis in a patient with Cohen syndrome]. *Ann Dermatol Venereol*. 2020 Jul 31;S0151-9638(20)30300-8. French. doi: 10.1016/j.annder.2020.07.004. Epub ahead of print. PMID: 32747030.

Contraception, Sexuality and Pregnancy in Women with Psoriasis: Real-Life Experience of 235 Women.

Maccari F, Fougerousse AC, Reguiat Z, Taieb C. *Clin Cosmet Investig Dermatol*. 2020 Nov 11;13:817-823. doi: 10.2147/CCID.S275512. PMID: 33204135; PMCID: PMC7666974.

MALADIE DE VERNEUIL

• BIOTHÉRAPIES POUR LES MALADIES DE VERNEUIL DE L'ENFANT

Hidradenitis suppurativa management using TNF inhibitors in patients under the age of 18: a series of 12 cases.

Fougerousse AC, Reguiat Z, Roussel A, Bécherel PA; GEM ResoVerneuil. *J Am Acad Dermatol*. 2020 Jul;83(1):199-201

Communications

Journées Dermatologiques de Paris 2019

Prise en charge de la maladie de Verneuil par anti TNF chez des patients de moins de 18 ans : une série de 12 cas

Anne-Claire Fougerousse, Ziad Reguiat, Aude Roussel, Pierre-André Becherel, pour le GEM ResoVerneuil

EHSF 2020 Athenes

Hidradenitis suppurativa management using TNF inhibitors in patients under the age of 18 : a series of 12 cases

Anne-Claire Fougerousse, Ziad Reguiat, Aude Roussel, Pierre-André Becherel, pour le GEM ResoVerneuil

• SECUKINUMAB DANS LA MALADIE DE VERNEUIL

Effectiveness of secukinumab in Hidradenitis Suppurativa: an open study (20 cases)

Reguiaï Z, Fougrousse AC, Maccari F, Bécherel PA. Effectiveness of secukinumab in hidradenitis suppurativa: an open study (20 cases). *J Eur Acad Dermatol Venereol*. 2020 May 13. doi: 10.1111/jdv.16605. Epub ahead of print. PMID: 32401354.

Communications

EHSF 2019 Wrocław

Effectiveness of secukinumab (an-IL-17 monoclonal Ab) in hidradenitis suppurativa : an open study (17 cases)

PA Becherel, AC Fougrousse, Z Reguiaï

Journées Dermatologiques de Paris 2019

Interet du secukinumab pour le traitement de la maladie de Verneuil

Ziad Reguiaï, Anne Claire Fougrousse, François Maccari, Pierre-André Bécherel et ResoVerneuil

• AUTRES PUBLICATIONS

Hidradenitis Suppurativa and Bipolar Disorders : A Role for Lithium Therapy ?

Benhadou F, Villani AP, Guillem P. *Dermatology*. 2020 Feb 7;1-2. doi: 10.1159/000505912.

Hidradenitis Suppurativa or Hidradenitis Suppurativa-Like Lesions Located on Amputation Strumps ? Description of 2 cases

Kluger N, Guillem P, Kivivuori M, Isoherranen K. *Skin Appendage Disord*. 2020 Jan;6(1):37-40.

Hidradenitis Suppurativa Influences Tattooing Practice in Women.

Guillem P, Raynal H, Wendling A, Kluger N. *Dermatology*. 2020 Jan 20;1-7. doi: 10.1159/000504436.

Which Factors Determine Affected Sites in Hidradenitis Suppurativa ?

Benhadou F, Villani AP, Guillem P. *Dermatology*. 2020;236(1):15-20. doi: 10.1159/000505292.

ECZEMA

• PELADE SOUS DUPILUMAB



Investigateur principal :

Dr Ziad Reguiaï

Travail collaboratif avec le GREAT

Objectif : Appel à cas de pelades survenues sous dupilumab

Nombre de patients inclus : 8

Nombre de contres participants : 6

Communications

Journées Dermatologiques de Paris 2019

Pelade et Traitement de la dermatite atopique par Dupilumab: série de 8 patients

Julie Kieffer, Delphine Staumont (au nom du GREAT SFD), François Maccari, Caroline Jacobzone-Leveque, Thierry Boyé, Anne-Claire Fougrousse, Ziad Reguiaï, ResoEczema

Accepté pour publication dans *European Journal of Dermatology*

Alopecia and treatment of atopic dermatitis by dupilimab : a series of eight cases

Kieffer J., Staumont D., Maccari F., Jacobzone-Leveque C., Boyé T., Fougrousse AC., Reguiaï Z.

Impact of the COVID-19 Pandemic on Chronic Inflammatory Dermatoses: Mixed Messages Regarding the Dermatologist's Point of View and the Patient's Concerns

Anne-Claire FOUGEROUSSE¹, François MACCARI¹, Ziad REGUIAT¹, Edouard BEGON², Valérie PALLURE³, Charles TAIEB⁴, Céline GIRARD⁵ and Laure MÉRY-BOSSARD⁶; for the GEM Resopso
¹Dermatology Department, Military Teaching Hospital Bégin, 69 avenue de Paris, FR-94360 Saut Mandé, ²Private Practice, La Varenne Saint Hilaire, Dermatology Departments, ³Courancy Polyclinic, Reims, ⁴Hospital Center Pontoise, Pontoise and ⁵Hospital Center Perpignan, Perpignan, ⁶Wecker Enfants-Malades Hospital, Paris, ⁷Dermatology Department, Teaching Hospital, Montpellier, and ⁸Dermatology Department, Intercommunal Hospital Center, Pissy-St Germain en Laye, France. E-mail: ac.fougerousse@gmail.com
 Accepted Jul 9, 2020; Epub ahead of print Jul 31, 2020

The COVID-19 pandemic in France led to the implementation of lockdown measures on 17 March 2020, limiting medical activity to urgent care. Between 15 and 27 April 2020, we evaluated the impact of these measures on the management of chronic inflammatory dermatoses (CID), through interviews with dermatologists and patients (members of the Association France Psoriasis, Association Française de l'Eczéma, Solidarité Verneuil and Association Française pour la Recherche sur l'Hydroadénite), using dedicated questionnaires.

A total of 308 dermatologists and 2,141 patients participated in this study. Of the patients, 71.8% were women, 67.1% had psoriasis, 17.3% had hidradenitis suppurativa and 15.6% had atopic dermatitis. During the study period, 36.2% of the patients had a scheduled appointment planned. Of these patients 22.7% kept the appointment, 22.7% cancelled or postponed the appointment themselves, and 54.8% of the appointments were cancelled or postponed by the dermatologist. Seventy percent (70%) of patients whose appointments had been cancelled or postponed by the dermatologist reported that no alternative solution had been offered to them.

In contrast, dermatologists reported that they rescheduled CID follow-up appointments in 95% of cases and that they performed follow-up remotely (remote consultation, management by telephone or e-mail) in 95.1% of cases. Of the 1,593 patients who received treatment for their CID, 76.0% continued their treatment regimen, 16.7% discontinued treatment due to the fear of side-effects, 5.6% discontinued treatment on the advice of their dermatologist, and 1.7% discontinued treatment due to problems with availability in pharmacies.

Dermatologists reported that during the pandemic period, they had stopped systemic (methotrexate, cyclosporine) and biologic treatments in 1.62% and 1% of their patients, respectively.

Usual treatment was maintained in the majority of patients, or its continuation was discussed, depending on the patient's comorbidities. Initiation of systemic and biologic treatment was postponed in 63.6% and 41.2% of cases, respectively. The COVID-19 pandemic was considered to have had a negative impact on the management of CID by 40.3% of patients and 49.7% of dermatologists. Moreover, 69% of patients reported that their CID worsened during lockdown.

Prior to the COVID-19 pandemic, 9.1% of dermatologists were already using remote consultations. This figure increased to 68.8% during the lockdown, and 52.3% stated that they would conduct more remote consultations after the end of the pandemic.

The COVID-19 pandemic and the lockdown measures greatly modified consultation modalities for CID (1, 2). The lack of an alternative to face-to-face appointments for the majority of patients may be explained by the fact that remote consultations were not used by the vast majority of dermatologists before the pandemic. Remote teleconsultation procedures took several days to a week to implement, which explains the discrepancies observed between patients' and dermatologist's statements. Dermatologists did not interrupt systemic or biologic therapy regimens of patients with CID, in accordance with the recommendations of different scientific associations issued during the first week of March 2020 (3). The rate of interruption of treatment may be explained by the lack of knowledge of the pathophysiology of the COVID-19 infection, particularly that of the severe forms. The extensive media coverage of this pandemic may also have worried both patients and dermatologists. Moreover, a significant proportion of both patients and dermatologists reported that the pandemic had a negative impact on the management of CID.

The COVID-19 pandemic has enabled dermatologists to accelerate the implementation of online dermatology consultations for patients with CID, thus helping patients to cope with their chronic disease and reducing its impact on their daily life. This period has also highlighted the interest in using digital methods, such as webinars and other specialized web-based approaches, to provide updated information for patients with CID receiving systemic or biologic treatments.

ACKNOWLEDGEMENTS

The authors acknowledge the participation of dermatologists and patients in this study and Karl Patrick Göritz, SMWS France, for editing services.

REFERENCES

- Gisondi P, Piaserico S, Conbi A, Naldi L. Dermatologists and SARS-CoV-2: the impact of the pandemic on daily practice.
- Société Française de Dermatologie. Courrier du 4 mars adressé au Directeur général de la Santé (accessed 2 May 2020). Available from: <https://www.sfdermato.org/media/pdf/actualite/actu-psocnverti-4612e01ee69fe6ef2ca4eb7b0d1b823.pdf>.

This is an open access article under the CC BY-NC license. www.medicaljournals.se/acta
 Journal Compilation © 2020 Acta Dermato-Venerologica.

doi: 10.2340/00015555-3610
 Acta Derm Venereol 2020; 100: adv00248

- J Eur Acad Dermatol Venereol 2020; 34: 1196–1201.
 2. Perkins S, Cohen JM, Nelson CA, Bunick CG. Tele dermatology in the era of COVID-19: experience of an academic department of dermatology. J Am Acad Dermatol 2020; 83: e43–e44.

Effectiveness and Safety of Anti-interleukin-17 Therapies in Elderly Patients with Psoriasis

Céline PHAN¹, Nathalie BENETON², Juliette DELAUNAY³, Ziad REGUIAI⁴, Claire BOULARD⁵, Anne-Claire FOUGEROUSSE⁶, Elisa CINOTTI⁷, Marco ROMANELLI⁸, Laure MERY-BOSSARD⁹, Demitille THOMAS-BEAULIEU¹⁰, Josiane PARIER¹¹, François MACCARI¹², Jean-Luc PERROT¹³, Mireille RUER-MULARD¹⁴, Marie BASTIEN¹⁵, Edouard BEGON¹⁶, Mahtab SAMIMI¹⁷, Caroline JACOBZONE¹⁸, Nathalie QUILES-TSIMARATOS¹⁹, Vincent DESCAMPS²⁰, Maud STEFF²¹, Paul BILAN²², Annie VERMERSCH-LANGLIN²³, Mathilde KEMULA²⁴, Emmanuelle AMAZAN²⁵, Ingrid KUPFER-BESSAGUET²⁶, Anne-Caroline COTTENCIN²⁷, Francesca PRIGNANO²⁸, Bulai LIVIDEANU²⁹, Jeremy GOTTLIEB³⁰, Alain BEAUCHET³¹ and Emmanuel MAHÉ³²; for the Groupe d'Etudes Multicentriques (GEM) RESOPSO

Departments of Dermatology; ¹Hospital Victor Dupouy, Argenteuil, ²Hospital of Le Mans, Le Mans, ³University Medical center of Angers, Angers, ⁴Polyclinic of Courlancy, Reims, ⁵Hospital Jacques Monod, Le Havre, ⁶Hospital Bégin, Saint Mandé, France, ⁷Department of medicine et neuroscience, University of Siene, Siene, ⁸University of Pise, Pise, Italy, ⁹Hospital Center of Pissy/Saint-Germain-en-Laye, Saint-Germain-en-Laye, France, ¹⁰University Hospital Center of Saint-Etienne, Saint-Etienne, ¹¹Hospital of Pontoise, Pontoise, ¹²University Hospital Center of Tours, ¹³Hospital Center of Lorient, Lorient, ¹⁴Hospital Saint-Joseph, Marseille, ¹⁵Hospital Bichat-Claude Bernard, Paris, ¹⁶Hospital Robert-Ballanger, Aulnay-sous-Bois, ¹⁷University Hospital Center of Martinique, Fort-de-France, Martinique, ¹⁸Hospital Center of Niort, Niort, France, ¹⁹Hospital of Firenze, Firenze, Italy and ²⁰Hospital Larrey, Toulouse, ²¹Private Office, La Varenne, ²²Private Office, Martigues, ²³Private Office, Joinville le Pont, France, ²⁴Department of Dermatology/HIV, Hospital Jean Bernard, Valenciennes, ²⁵Private Office, Paris, ²⁶Private Office, Lille, ²⁷Department of Internal Medicine, University Hospital Center Bicêtre, Le Kremlin Bicêtre, and ²⁸Department of Public Health, University Hospital Center Ambroise Paré, Boulogne-Billancourt, France

Anti-interleukin-17 agents have recently been developed for the treatment of psoriasis. This study evaluated the tolerance and effectiveness of anti-interleukin-17 agents for psoriasis in elderly patients in daily practice. A multicentre, retrospective study was performed, involving psoriatic patients aged ≥ 65 years who had received an anti-interleukin-17 agent, including secukinumab, ixekizumab or brodalumab. A total of 114 patients were included: 72 received secukinumab, 35 ixekizumab, and 7 brodalumab. Treatment was stopped in 32 patients (28.9%), because of relapses in 14 patients (41.2%), primary failures in 11 patients (32.4%), or adverse events in 7 patients (20.6%). The 3 most frequently reported adverse events were injection site reactions ($n = 4$), oral candidiasis ($n = 3$), and influenza-like illness ($n = 3$). Regarding effectiveness, 80 patients (70%) reached a Physician Global Assessment score of 0/1, 6 months after treatment initiation. In conclusion, anti-interleukin-17 therapy appears to be an effective and safe therapeutic option for psoriasis treatment in patients aged ≥ 65 years.

Key words: psoriasis; anti-interleukin 17; elderly; safety; drug survival.

Accepted Oct 21, 2020; Epub ahead of print Oct 28, 2020

Acta Derm Venereol 2020; 100: adv00316.

Corr: Céline Phan, Department of Dermatology, Hôpital Victor Dupouy, 69 rue du Lieutenant-Colonel Prud'hon, FR-95100 Argenteuil, France. E-mail: celine.phan@ch-argenteuil.fr

Psoriasis is a chronic disease characterized by inflammation of the skin and joints (1). Onset can occur at any age, but 2 peaks in age of onset have been reported: the first at 15–25 years of age and the second at 50–60 years of age (1–3). Information about psoriasis in elderly patients is scarce, as older patients are often excluded from clinical trials and studies. However, comorbidities

SIGNIFICANCE

Anti-interleukin-17 agents are biologic therapies that have recently been developed for the treatment of psoriasis. However, data on their use for patients ≥ 65 years are limited. A total of 114 elderly psoriatic patients who had received an anti-interleukin-17 agent were included in this study. Treatment was stopped in 28.9% of patients, mostly because of relapses, primary failures and adverse events. The 3 most frequently adverse events ($n = 10$) were injection site reactions, oral mycosis, and influenza-like illness. Regarding effectiveness, the treatment was considered efficient in 70% of patients, 6 months after treatment initiation. Anti-interleukin-17 therapy appears to be an effective and safe therapeutic option for psoriasis patients aged ≥ 65 years.

and possible drug interactions make management of psoriasis in this population particularly problematic (4–8). As there are limited data about the clinical features and toxicities in this group (9), elderly patients with moderate-to-severe psoriasis, in particular those with multiple comorbidities, may be undertreated.

Anti-interleukin-17 (IL-17) biological agents have recently been licensed in France for the treatment of psoriasis. Secukinumab (Novartis Pharma, Rueil-Malmaison France) (Cosentyx[®]) and Ixekizumab (Lilly, Neuilly sur Seine, France) (Taltz[®]) are monoclonal antibodies that selectively inhibit IL-17A. They have shown significant efficacy in the treatment of moderate-to-severe psoriasis and psoriatic arthritis, demonstrating rapid onset of action and sustained responses with favourable safety profiles (10–17). Brodalumab (Léo Pharma, Voisins-Le-Bretonneux, France) (Kyntheum[®]) is a fully human anti-IL17 receptor A monoclonal antibody approved for the treatment of moderate-to-severe psoriasis in patients who have had an inadequate response to other systemic therapies (18, 19).

Few data are available on the use of biological agents in the elderly population. The aim of this study was to evaluate the tolerance and effectiveness of anti-IL-17 agents used in daily practice for the treatment of psoriasis in patients over 65 years of age.

METHODS

Study design and participants

This multi-centre, retrospective study was performed using data from the medical records of patients receiving an anti-IL-17 agent for the treatment psoriasis. Data were retrieved from February to June 2019 by French and Italian dermatologists who were members of the Groupe d'Etudes Multicentriques (GEM) RESOPSO.

Patients were included if they had received at least one injection of an anti-IL-17 agent (i.e. secukinumab, ixekizumab, or brodalumab) on or after the age of 65 years. Patients treated with these drugs as part of a clinical trial were excluded. Also excluded were patients who received one of the biological agents for psoriatic arthritis.

Data collection

Demographic data (including age, sex, body mass index (BMI), clinical characteristics, and comorbidities) were collected from patient medical records by the dermatologist. Details of the clinical type of psoriasis, and of current and previous systemic treatments for psoriasis, were also collected. Data on psoriasis severity (as assessed using the Physician Global Assessment (PGA) score) were collected at baseline, and 3–6 months after initiation of anti-IL-17 therapy. The study also collected the dates and causes of discontinuation of therapy with any of the biological agents, and details of any adverse events (AEs) and serious adverse events (SAEs).

Definitions of serious adverse events

SAEs included AEs that resulted in death; were life-threatening; required inpatient hospitalization or caused prolongation of existing hospitalization; resulted in persistent or significant disability or incapacity; or required intervention to prevent permanent impairment or damage.

Table 1. Demographic and clinical characteristics of the total population and in patients stratified by age at treatment initiation

Characteristics	All n = 114	Age at initiation of anti-interleukin-17			p-value
		65–74 years n = 88	75–84 years n = 21	≥ 85 years n = 5	
Sex, male, n (%)	60 (52.6)	48 (54.5)	11 (52.4)	1 (20.0)	0.32
Age, years, mean ± SD	72.9 ± 6.0	70.3 ± 2.9	79.8 ± 3.9	89.2 ± 3.3	<0.001
Psoriasis characteristics					
Age of onset, years, mean ± SD	49.5 ± 16.4	47.3 ± 15.2	49.2 ± 17.3	66.2 ± 25.6	0.04
Plaque psoriasis (missing data: 2), n (%)	99 (88.4)	77 (88.5)	17 (85.0)	5 (100.0)	0.49
Psoriatic arthritis, n (%)	34 (29.8)	23 (26.1)	10 (47.6)	1 (20.0)	0.13
Comorbidities					
BMI (missing data: 19), mean ± SD	29.5 ± 5.4	29.4 ± 5.4	30.4 ± 5.5	26.0 ± 1.8	0.40
Obesity, n (%)	40 (35.1)	32 (40)	8 (38.0)	0 (0)	0.43
Diabetes, n (%)	29 (25.4)	23 (26.1)	6 (28.0)	0 (0)	0.39
Dyslipidaemia, n (%)	54 (47.4)	38 (43.2)	14 (66.7)	2 (40)	0.14
Hypertension, n (%)	72 (63.2)	55 (63.2)	14 (66.7)	3 (60)	0.94
Tobacco, n (%)	25 (21.9)	22 (25.0)	2 (9.5)	1 (20)	0.30
Major adverse cardiac events, n (%)	24 (21.1)	18 (20.5)	6 (28.0)	0 (0)	0.35
WHO Classification (missing data: 27), n					
0	71	57	12	2	
1	12	10	2	0	
2	2	2	0	0	
3	1	1	0	0	
4	1	0	0	1	

SD: standard deviation; BMI: body mass index

www.medicaljournals.se/acta

Study outcomes

The primary objective was analysis of treatment discontinuation and the occurrence of AEs and SAEs, together with identification of any risk factors associated with these events.

The secondary objective was to determine the effectiveness of anti-IL-17 therapy by evaluating the number of patients who obtained a PGA score of 0/1 (clear or almost clear) between 3 and 6 months after starting treatment. The rate of treatment continuation was also assessed over the year following the start of treatment. Outcomes were evaluated for the population as a whole, and compared between groups stratified by age at anti-IL-17 treatment initiation: 65–74, 75–84 and ≥ 85 years of age.

Statistical analysis

Quantitative data were expressed as mean ± standard deviation, and qualitative data as frequency and percentages. Comparisons of means were performed using the Student's *t*-test or by analysis of variance (ANOVA), as appropriate. Comparisons of frequencies were performed using χ^2 test or Fisher's exact test, as appropriate. Continuation rates were calculated using the Kaplan–Meier method. Curves for patients stratified by age were compared using the log-rank test. A *p*-value below 0.05 was considered statistically significant. Statistical analyses were performed using R software, version 3.4.3 (<http://www.r-project.org/>, Vienna, Austria).

RESULTS

In total, 114 patients were included: 72 patients received secukinumab, 35 ixekizumab, and 7 brodalumab. The characteristics of the whole population and the 3 sub-groups stratified by age at treatment initiation are shown in **Table 1**. Common comorbidities included hypertension (63.2%), dyslipidaemia (47.4%) and obesity (35.1%).

Among patients who discontinued treatment, the mean treatment duration was 12 months. Causes of anti-IL-17 discontinuation are reported in **Table 2**. Treatment was stopped in 28.9% of patients, with relapses being the leading cause of discontinuation (41.2% of patients), followed by primary failures (32.4%) and AEs (20.6%).

Fifteen patients reported AEs, including injection site reactions (*n* = 4), oral candidiasis (*n* = 3) and influenza-like illness (*n* = 3). Two patients reported SAEs: intracerebral haematoma (*n* = 1) and palmo-plantar pustulosis (*n* = 1). There was no significant association between the frequency of AEs and age (*p* = 0.34).

Regarding effectiveness, the mean PGA score at initiation was 3.5, decreasing to 0.9 after 3 months of treatment. Eighty patients (70%) had reached a PGA score of 0/1 within 3–6 months of treatment initiation. There was no significant difference in drug survival between the 3 treatments (**Fig. 1**, *p* = 0.42), and the

Table 11. Treatment status and causes of discontinuation

Treatment	All n=114	Age at initiation of anti-IL-17			p-value
		65-74 years n=88	75-84 years n=21	≥85 years n=5	
Stopped, n (%)	38 (28.9)	25 (28.4)	6 (28.6)	2 (0.4)	0.86
If stopped, duration, mean±SD	12±11.8	13±13.2	9.0±4.3	26±2.5	0.07
If continued, duration, mean±SD	16.0±12.0	15.7±12.9	15.2±11.4	9.1±12.6	0.10
PGA at initiation, mean±SD	3.5±1.5	3.5±1.6	2.9±0.9	3.6±0.9	0.15
PGA after 3-6 months, mean±SD	0.9±1.3	0.9±1.4	0.8±0.8	0.3±0.5	0.37
Causes of treatment discontinuation	n=34*	n=26*	n=6	n=2	
Relapse, n (%)	14 (41.2)	10 (38.5)	0	1 (50.0)	0.17
Primary failures, n (%)	11 (32.4)	8 (30.8)	3 (50.0)	0	0.39
Adverse event, n (%)	7 (20.6)	6 (23.1)	3 (50.0)	1 (50.0)	0.34
Patient's choice, n (%)	0 (0)	0 (0)	0	0	ND
Remission, n (%)	0 (0)	0 (0)	0	0	ND
Other, n (%)	2 (5.9)	2 (7.7)	0	0	ND

*Patients provided more than one reason for discontinuation. SD: standard deviation; PGA: Physician Global Assessment; ND: Not determined

survival rate for the 3 treatments did not seem to differ by age (as shown for secukinumab in Fig. 2).

DISCUSSION

This study provides real-life data on the effectiveness and safety of anti-IL-17 agents for the treatment of cutaneous psoriasis in a large population of patients over 65 years of age. Our findings show that the anti-IL-17 agents were an effective treatment for psoriasis in elderly patients, with 70% of patients in the total population (68% for secukinumab, 74% for ixekizumab and 71% for brodalumab) achieving a PGA score of 0/1 between 3 and 6 months after initiation of treatment.

These results for secukinumab are in concordance with those reported in the literature. A *post hoc* analysis of 3 phase III trials (ERASURE: <https://clinicaltrials.gov/ct2/show/NCT01365455>, FIXTURE: <https://clinicaltrials.gov/ct2/show/NCT01358578> and CLEAR: <https://clinicaltrials.gov/ct2/show/NCT02074982>) evaluating the efficacy and safety of secukinumab at the recommended dose (300 mg) in elderly subjects (≥65 years of age), showed that the efficacy of secukinumab in elderly

psoriasis patients over 52 weeks of treatment was similar to that in younger cohorts (6, 9). Similar rates of PASI 75 and DLQI 0/1 response were also observed in the 2 age groups.

Less information is available on the use of ixekizumab and brodalumab in elderly patients, as licensing of these agents for the treatment of moderate-to-severe psoriasis was obtained more recently. For the phase III trials of ixekizumab (UNCOVER-1, -2 and -3), the only age eligibility criterion was that patients were 18 years or older (17). A total of 301 patients, out of the 4,204 patients exposed to the drug

in the clinical trials, were aged 65 years or over and 36 patients were aged 75 years or older. Pharmacokinetic analysis showed that clearance in the elderly patients was similar that in the younger patients, although the population studied was limited. Concerning brodalumab, eligibility for inclusion in the phase III studies (AMAGINE-1, -2 and -3) was limited to adult subjects up to 75 years of age (18, 19): out of a total population of 4,271 patients, 259 were aged between 65 and 74 years and 14 were aged ≥75 years (6).

In the current study, anti-IL-17 therapy was discontinued in 28.9% of patients. The main reasons for discontinuation in this elderly population were relapses (41.2%), primary failures (32.4%) and AEs (20.6%). More precisely in secukinumab group (n=72), the treatment was discontinued in 32% of patients: 37.5% of relapses and primary failures and 22% of AEs; in ixekizumab group (n=35), treatment was discontinued in 23% of patients: 62.5% of relapses, 25% of primary failures and 12.5% of AEs; in brodalumab group (n=7), treatment was discontinued for 2 patients: one because of AEs and another for other reasons. In a recent systematic review,

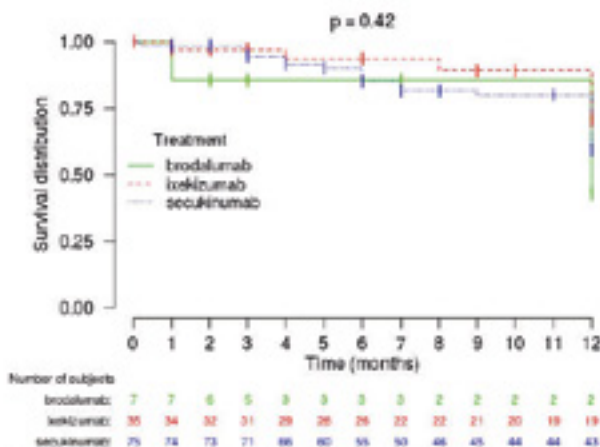


Fig. 1. Anti-interleukin-17 one-year continuation rates.

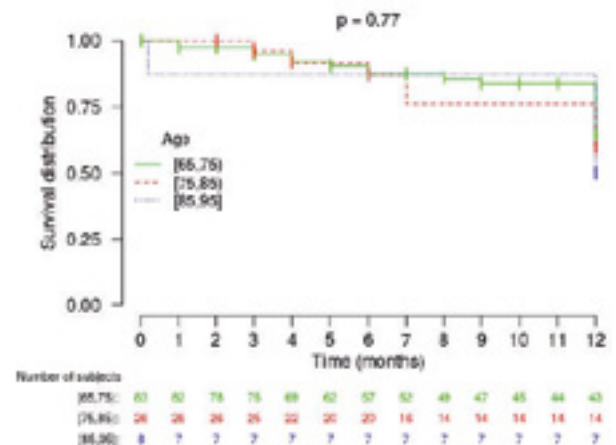


Fig. 2. Secukinumab one-year continuation rates in patients stratified by age at treatment initiation.

Sandhu et al. (20) reported that patients aged ≥ 65 years were more likely than younger patients to discontinue secukinumab over the 52-week treatment duration, with 5 elderly patients (7.5%) vs 15 younger patients (1.8%) discontinuing treatment.

The most frequent AEs reported in our study were injection site reactions ($n=4$), oral candidiasis ($n=3$) and influenza-like illness ($n=3$). These AEs do not seem to differ from those reported in younger populations. In the study of Sandhu et al. (20) and the phase III trials reported by Körber et al. (9), the total rate of AEs reported in association with secukinumab use was similar between elderly and younger subjects. However, in keeping with reports in the literature concerning the use of anti-tumour necrosis factor- α agents, the total rate of SAEs was higher in elderly subjects than in younger subjects (14.9% vs 8.2%), although the sample size for elderly patients included in the original studies was small (9, 20).

The strengths of the current study include the real-life design, the large sample size and the detailed assessments of the patient's characteristics.

Nevertheless, the presence of reporting bias generated by the use of patient reported characteristics cannot be ruled out. There are difficulties about reporting the exact chronology between the treatment and the adverse event, grading the severity of AEs or excessive reporting of mild AEs. Moreover, the number of patients is limited for 2 of the drugs evaluated (ixekizumab and brodalumab). Finally, the transversal design does not allow any conclusions to be drawn about the causality of the observed associations.

In conclusion, anti-IL-17 agents appear to be an effective and safe therapeutic option for the treatment of psoriasis in patients aged ≥ 65 years. The main AEs reported in elderly patients do not seem to differ from those reported previously in younger populations, despite the greater frequency of comorbidities in the elderly population (5).

ACKNOWLEDGEMENTS

Disclosure: NB has paid activities as a consultant, advisor, or speaker for Abbvie, Celgene, Leo Pharma, Lilly, Janssen Cilag, Novartis, Pfizer, and UCB; JD for Abbvie, Leo Pharma, Novartis, and Janssen Cilag; ZR for Celgene, Janssen Cilag, Pfizer, Abbvie, Leo Pharma, Lilly, UCB, Medac, MSD, and Novartis; CB for Novartis, Abbvie, and Celgene; A-CF for Novartis, Abbvie, Pfizer, Lilly, Celgene, and Janssen Cilag; LM-B for Abbvie, Leo Pharma, Novartis, Celgene, and Janssen Cilag; DT-B for Novartis, Abbvie, Janssen Cilag, Lilly, Leo Pharma and Celgene; JP for Janssen Cilag, Novartis, Celgene, and Leo Pharma; J-LP for Novartis, Abbvie, Pfizer, Leo Pharma, and Janssen Cilag; CJ for Abbvie, Leo Pharma, Novartis, Celgene, and Janssen Cilag; N. Q-T for Abbvie, Celgene, Janssen Pharma, Leo Pharma, Lilly, Novartis, Pfizer, and UCB; EM for Abbvie, Amgen, Janssen Cilag, Celgene, Leo Pharma, Lilly, Novartis, and Pfizer; M.K for Abbvie, Leo Pharma, Lilly, Novartis, and Janssen Cilag; J.G for Abbvie, Celgene, Lilly, Novartis, Janssen Cilag and UCB; I.K-B for Abbvie, Janssen, Leo, Lylli, Novartis, Sanofi, Urgo.

www.medicaljournals.se/acta

REFERENCES

- Phan C, Sigal ML, Estève E, Reguial Z, Barthélémy H, Beneton N, et al. Psoriasis in the elderly: epidemiological and clinical aspects, and evaluation of patients with very late onset psoriasis. *J Eur Acad Dermatol Venereol* 2016; 30: 78–82.
- Stuart P, Malick F, Nair RP, Henseler T, Lim HW, Jenisch S, et al. Analysis of phenotypic variation in psoriasis as a function of age at onset and family history. *Arch Dermatol Res* 2002; 294: 207–213.
- Henseler T, Christophers E. Psoriasis of early and late onset: characterization of two types of psoriasis vulgaris. *J Am Acad Dermatol* 1985; 13: 450–456.
- Kwon HH, Kwon IH, Youn JI. Clinical study of psoriasis occurring over the age of 60 years: is elderly-onset psoriasis a distinct subtype? *Int J Dermatol* 2012; 51: 53–58.
- Balato N, Patruno C, Napolitano M, Patri A, Ayala F, Scarpa R. Managing moderate-to-severe psoriasis in the elderly. *Drugs Aging* 2014; 31: 233–238.
- Di Lernia V, Goldust M. An overview of the efficacy and safety of systemic treatments for psoriasis in the elderly. *Expert Opin Biol Ther* 2018; 18: 897–903.
- Kamel JG, Yamauchi PS. Managing mild-to moderate psoriasis in elderly patients: role of topical treatments. *Drugs Aging* 2017; 34: 583–588.
- Plascerico S, Conti A, Lo Console F, De Simone C, Prestinari F, Mazzotta A et al. Efficacy and safety of systemic treatments for psoriasis in elderly patients. *Acta Derm Venereol* 2014; 94: 293–297.
- Körber A, Papavassilis C, Bhosekar V, Reinhardt M. Efficacy and safety of secukinumab in elderly subjects with moderate to severe plaque psoriasis: a pooled analysis of Phase III studies. *Drugs Aging* 2018; 35: 135–144.
- Hueber W, Patel DD, Dryja T, Wright AM, Koroleva I, Bruhn G, et al. Effects of AIN457, a fully human antibody to interleukin17A, on psoriasis, rheumatoid arthritis, and uveitis. *Sci Transl Med* 2010; 2: 52–72.
- Papp KA, Langley RG, Sigurgeirsson B, Abe M, Baker DR, Konno R, et al. Efficacy and safety of secukinumab in the treatment of moderate-to-severe plaque psoriasis: a randomized, double-blind, placebo-controlled phase II dose-ranging study. *Br J Dermatol* 2013; 168: 412–421.
- Mease PJ, McInnes IB, Kirkham B, Kavanaugh A, Rahman P, van der Heijde D, et al. Secukinumab inhibition of interleukin17A in patients with psoriatic arthritis. *N Eng J Med* 2015; 373: 1329–1339.
- Langley RG, Elewski BE, Lebwohl M, Reich K, Griffiths CE, Papp K, et al. Secukinumab in plaque psoriasis – results of two phase 3 trials. *N Eng J Med* 2014; 371: 326–338.
- Blauvelt A, Reich K, Tsai TE, Tyring S, Vanaclocha F, Klingo K, et al. Secukinumab is superior to ustekinumab in clearing skin of subjects with moderate-to-severe plaque psoriasis up to 1 year: results from the CLEAR study. *J Am Acad Dermatol* 2017; 76: 60–69.
- European Medicines Agency. Taltz (ixekizumab): summary of product characteristics. 2015. <http://www.ema.europa.eu>. Accessed 20 Dec 2016. Siliq (package insert). Bridgewater, NJ: Bausch Health 2017.
- Griffiths CE, Reich K, Lebwohl M, van de Kerkhof P, Paul C, Menter A et al. Comparison of ixekizumab with etanercept or placebo in moderate-to-severe psoriasis (UNCOVER-2 and UNCOVER-3): results from two phase 3 randomised trials. *Lancet* 2015; 386: 541–551.
- Gordon KB, Blauvelt A, Papp KA, Langley RG, Luger T, Ohtuski M, et al. Phase 3 trials of ixekizumab in moderate-to-severe plaque psoriasis. *N Engl J Med* 2016; 375: 345–356.
- Lebwohl M, Strober B, Menter A, Gordon K, Weglowska J, Puig L, et al. Phase 3 studies comparing brodalumab with ustekinumab in psoriasis. *N Engl J Med* 2015; 373: 1318–1328.
- Papp KA, Reich K, Paul C, Blauvelt A, Baran W, Bolduc C, et al. A prospective phase III, randomized, double-blind, placebo-controlled study of brodalumab in patients with moderate-to-severe plaque psoriasis. *Br J Dermatol* 2016; 175: 273–286.
- Sandhu VK, Ighani A, Fleming P, Lynde CW. Biologic treatment in elderly patients with psoriasis: a systematic review. *J Cutan Med Surg* 2020; 1203475419897578.

LETTER TO THE EDITOR

Systemic or biologic treatment in psoriasis patients does not increase the risk of a severe form of COVID-19

Dear Editor

Some systemic and biologic psoriasis treatments [SBT] have been associated with an increased risk of infection.¹ To date, more and more data regarding the risk of COVID-19 infection in patients receiving SBT become available.²⁻⁵

To enrich these data, we evaluated the frequency of severe COVID-19 infections, defined as hospitalization or death, in psoriasis patients receiving SBT, especially during the 4 months following SBT initiation.

From 27 April to 7 May 2020, we conducted a national, multi-centre, cross-sectional study during consultations or teleconsultations, including adult psoriasis patients receiving SBT.

The following elements were collected: gender, age, current psoriasis treatment, treatment period (initiation [up to 4 months] or maintenance [from 5th month]), treatment

continued or stopped during the pandemic. Moreover, we collected data about comorbidities such as obesity, hypertension and diabetes putting patients at risk of a severe form of COVID-19 infection, and information about a clinically confirmed diagnosis of COVID-19 defined as acute febrile respiratory infection, or sudden onset of headache, myalgia, ageusia, anosmia or asthenia,⁶ as well as COVID-19 confirmation by PCR testing and hospitalization.

Overall, data from 1418 patients were included. Patient characteristics are detailed in Table 1. Of the included patients, 300 were receiving methotrexate, 26 cyclosporine, 4 acitretin, 48 apremilast, 25 etanercept, 165 adalimumab, 40 infliximab, 8 certolizumab pegol, 240 ustekinumab, 206 secukinumab, 112 ixekizumab, 38 brodalumab, 146 guselkumab, 25 risankizumab and 35 combination of methotrexate and biologic. In total, 22.4% of patients on systemic therapy and 13.8% on biologics discontinued treatment during the pandemic.

We reported five patients with COVID-19 infection requiring hospitalization: a 27-year-old obese woman with Crohn's disease treated with adalimumab, a 36-year-old man treated with guselkumab, a 53-year-old man treated with methotrexate, and

Table 1 Patient characteristics

	Overall population		Treatment initiation period		Maintenance treatment period	
	n	%	n	%	n	%
	1418	100	230	16.22	1188	83.78
Sex						
Men	797	56.29	131	56.06	666	56.16
Women	619	43.71	99	43.04	520	43.84
Missing data	2		0		2	
Treatment						
Systemic	300	23.27	62	26.94	238	40.18
Biologic	1065	70.87	156	67.53	849	127.29
Anti-TNF	238	16.78	14	6.06	224	18.86
Anti-interleukin	767	54.09	142	61.47	625	52.61
Apremilast	48	3.39	10	4.33	38	3.20
Combination of methotrexate and biologic	35	2.47	2	0.87	33	2.78
Risk factor for severe COVID-19 infection						
Diabetes	111	7.83	12	5.15	99	8.32
Obesity (BMI > 30)	245	17.28	27	11.74	218	18.32
HTA	232	16.38	31	13.30	201	16.89
None	520	36.88	153	66.52	367	30.81

Treatment initiation period defined as the 4 months following treatment initiation. Maintenance treatment period defined as starting the 5th month of treatment. Systemic treatment: acitretin, methotrexate, cyclosporine. Anti-TNF: etanercept, adalimumab, infliximab, certolizumab pegol. Anti-interleukin: ustekinumab, secukinumab, ixekizumab, brodalumab, guselkumab, risankizumab.

Table 2 Frequency of COVID-19 infection cases according to treatment and treatment period

	Overall population		Treatment initiation period		Maintenance treatment period	
	n	%	n	%	n	%
Overall population						
Probable case	54	3.81	8	2.58	46	4.04
Case confirmed by PCR	12	0.85	1	0.43	11	0.93
Case confirmed by PCR and hospitalized	5	0.35	1	0.43	4	0.34
Systemic treatments						
Probable case	17	5.15	2	3.17	15	5.80
Case confirmed by PCR	3	0.91	0	0.00	3	1.12
Case confirmed by PCR and hospitalized	1	0.30	0	0.00	1	0.37
Biologics						
Probable case	33	3.28	3	1.92	30	3.53
Case confirmed by PCR	8	0.80	1	0.64	7	0.82
Case confirmed by PCR and hospitalized	3	0.30	1	0.64	2	0.24
Apremilast						
Probable case	3	6.25	1	10.00	2	5.28
Case confirmed by PCR	0	0.00	0	0.00	0	0.00
Case confirmed by PCR and hospitalized	0	0.00	0	0.00	0	0.00
Combination of methotrexate and biologics						
Probable case	1	2.86	0	0.00	1	3.03
Case confirmed by PCR	1	2.86	0	0.00	1	3.03
Case confirmed by PCR and hospitalized	1	2.86	0	0.00	1	3.03

Probable case defined as acute febrile respiratory infection, or sudden onset of headache, myalgia, ageusia, anosmia or asthenia. Treatment initiation period defined as 4 months following treatment initiation. Maintenance treatment period defined as starting the 5th month of treatment. PCR: polymerase chain reaction.

two patients required intensive care: a 71-year-old obese woman treated with methotrexate and etanercept, a 34-year-old obese man treated with ustekinumab. No deaths were reported. In all, 54 patients presented with a possible COVID-19 infection; confirmation by PCR testing was performed for 12 patients. The frequency of cases according to treatment and treatment period is specified in Table 2.

In our study, 0.35% of patients had a severe form of COVID-19 requiring hospitalization, 60% of whom (all in intensive care units) presented with other risk factors for severe infection. Two patients were hospitalized, due to their SBT, considered at the beginning of the pandemic as a risk factor for a severe form of COVID-19 infection.

Our data are consistent with those collected and analysed in Italy: Damiani *et al.* reported 5 hospitalizations out of 1193 patients treated by biologic or small molecules for their psoriasis, and no death was reported.⁶ Gisondi *et al.* reported in Northern Italy 4 hospitalizations out of 5206 patients receiving biologic treatment for psoriasis, again no death was reported. There was no over-risk of hospitalization in intensive care and death reported for patients receiving biological psoriasis treatment when compared to the general population.² Moreover, biologic treatment using immunosuppressive drugs such as guselkumab, ustekinumab, adalimumab, secukinumab, brodalumab or ixekizumab may even protect against the onset and evolution of COVID-19 infection.^{3,4,7}

[Correction added on 28 August 2020, after first online publication: On paragraph 8, the word 'brodalumab' has been added in this version.]

We did not observe a significant difference in the number severe cases of COVID-19, according to whether the patient was in the treatment initiation period (1 out of 230 patients) or in the maintenance period (4 out of 1188 patients), Fisher test $P = 0.58$, OR = 1.29 [95%CI 0.03–13.4].

The absence of a control group and no PCR or serologic confirmations of all probable cases were limitations of this study.

In conclusion, our study provides first data showing that there is no increased incidence of severe COVID-19 in psoriasis patients receiving SBT in the treatment initiation period compared to those in the maintenance period. Results may allow physicians to initiate, on a case-by-case basis, SBT in patients with severe psoriasis in the context of COVID-19 pandemic.

Acknowledgements

The authors acknowledge Dr Charlotte Fite, Dr Domitille Thomas-Beaulieu and Karl Patrick Göritz, SMWS France, for editing services.

Conflict of interest

None.

Funding sources

None.

A.-C. Fougousse,^{1,7} M. Perrussel,² P.-A. Bécherel,³
 E. Begon,⁴ V. Pallure,⁵ I. Zaraq,⁶ G. Chaby,⁷ J. Parier,^{8,9}
 M. Kemula,^{10,11} L. Mery-Bossard,¹² C. Poreaux,¹³
 C. Taleb,¹⁴ F. Maccari,^{1,8} Z. Reguiat,¹⁵
 the GEM Resopso

¹Dermatology Department, Military Teaching Hospital Bégin, Saint Mandé, France, ²Private Practice Aury, Dermatology Department, University Hospital Rennes, Rennes, France, ³Dermatology Department, Private Hospital Antony, France, ⁴Dermatology Department, Centre Hospitalier Portoise, Portoise, France, ⁵Dermatology Department, Perpignan Hospital, Perpignan, France, ⁶Dermatology Department, Saint-Joseph Hospital, Paris, France, ⁷Dermatology Department, University Hospital, Amiens, France, ⁸Private Practice, La Veronne Saint Hilaire, France, ⁹Dermatology Department, Saint Louis Hospital, Paris, France, ¹⁰Private Practice, Paris, France, ¹¹Dermatology Department, Tamier Hospital, Paris, France, ¹²Dermatology Department, Centre Hospitalier Intercommunal Pôissy-Saint Germain en Laye, Pôissy, France, ¹³Private Practice, Nancy, Pasteur Clinic, Essey-les-Nancy, France, ¹⁴Erms Clinic, Fontenay sous Bois, France, ¹⁵Dermatology Department, Courtaury Polyclinic, Reims-Bazannes, France

*Correspondence: A.-C. Fougousse,
 E-mail: ac.fougousse@gmail.com

References

- Kalb RL, Fiorentino DF, Lebwohl MG et al. Risk of serious infection with biologic and systemic treatment of psoriasis: results from the psoriasis longitudinal assessment and registry (PSOLAR). *JAMA Dermatol* 2015; 151: 961-969.
- Giondi P, Fischer P, Dupavo P et al. The impact of COVID-19 pandemic on patients with chronic plaque psoriasis being treated with biologic therapy: The Northern Italy experience. *Br J Dermatol* 2020; 28. <https://doi.org/10.1111/bjd.19158>
- Balotri R, Rech G, Girardelli CR. SARS-CoV-2 infection in a psoriatic patient treated with IL17 inhibitor. *J Eur Acad Dermatol Venereol* 2020. <https://doi.org/10.1111/jdv.16571>
- Conti A, Lasagni L, Bigli L, Pellacani G. Evolution of COVID-19 infection in 4 psoriatic patients treated with biological drugs. *J Eur Acad Dermatol Venereol* 2020. <https://doi.org/10.1111/jdv.16587>
- Santé Publique France. Définition de cas d'infection au SARS-CoV-2 (COVID-19) - Mise à jour le 07/05/2020, Santé Publique France. www.santepubliquefrance.fr/definition-de-cas-07-05-20, last accessed 07 May 2020.
- Damiani G, Pacifico A, Bragazzi NL, Malagoli P. Biologics increase the risk of SARS-CoV-2 infection and hospitalisation, but not ICU admission and death: real-life data from a large cohort during RED-ZONE declaration. *Dermatol Ther* 2020; e13475. <https://doi.org/10.1111/dth.13475>
- Berhades F, Del Marmol V. Improvement of SARS-CoV2 symptoms following Guselkumab injection in a psoriatic patient. *J Eur Acad Dermatol* 2020. <https://doi.org/10.1111/jdv.16590>

DOI: 10.1111/jdv.16761

Individual Burden of Psoriasis (I-BOP): Building and Validation of a New Scoring Tool for Patients with Psoriasis

This article was published in the following Dove Press journal:
Clinical, Cosmetic and Investigational Dermatology

Khaled Ezzedine¹
Anne Claire Fougerousse^{1,2,3}
Roberte Aubert¹
Jean-Benoit Monfort^{4,5}
Ziad Reguiai^{3,6}
Jason Shourick⁷
Charles Taieb^{8,9,10}
François Maccari^{3,10,11}

¹EA EpiDermE UPEC Université Paris-Est Créteil, Créteil, France; ²Hôpital d'instruction des armées, Saint-Mandé, France; ³Resopso, Paris, France; ⁴France Psoriasis, Association de Patients, Paris, France; ⁵Hôpital Tenon, Paris, France; ⁶Service de Dermatologie, Polyclinique Courfancy-Bezannes, Reims, France; ⁷Université Paris Sud, Paris, France; ⁸Santé Publique, Hôpital Necker Enfants Malades, Paris, France; ⁹European Market Maintenance Assessment, Fontenay-sous-Bois, France; ¹⁰Private Practice, La Varenne Saint Hilaire, France

*These authors contributed equally to this work

Background: Psoriasis impacts independently of its severity on patients' lifestyle and quality of life (QoL).

Aim: To build a tool for assessing the patient-reported psoriasis burden.

Methods: An expert group created a questionnaire using a standardized methodology building questionnaires assessing quality of life issues. The questionnaire was translated from French into a cultural and linguistically validated US English version.

Results: A conceptual questionnaire of 54 questions was created. The confirmatory analyses resulted in a 10-feature questionnaire divided into 4 internally consistent domains with a Cronbach's alpha coefficient of 0.9. It was reproducible and highly reliable. It correlated well with the Dermatology Life Quality Index (DLQI), Perceived Stress Scale (PSS), and SF-12 mental and SF12 physical scores.

Conclusion: This tool allows for the first time to assess the burden of psoriasis patients. Its use may allow improving medical and nonmedical patient care, thus improving their daily life.

Keywords: disease burden, psoriasis, quality of life, questionnaire, standardized method

Introduction

Psoriasis is a chronic condition requiring life-long treatment. Its worldwide prevalence has been estimated at approximately 1–3%.¹ It is mainly observed on the skin but may also affect joints. Up to 42% of patients with psoriasis also have associated psoriatic arthritis.^{2,3} Moreover, an increased risk of obesity, diabetes, and cardiovascular events has been reported for psoriasis patients.^{4,5}

But, psoriasis may also cause a psychiatric burden. In psoriasis patients, the appearance and discomfort of lesions, especially if visible, negatively impact self-esteem and quality of life (QoL) and may cause depression.^{6–9} Patients with psoriasis are tempted to cover visible zones attempted, may suffer from sexual problems, and avoid physical activities and may feel ashamed, anxious, and frustrated.^{6,10} As a result, treatment efficacy maybe impacted through a lack of compliance, starting a vicious circle.¹¹ Therefore, identifying the most vulnerable patients may not only allow managing these psychological issues but also improve their adherence to treatment.¹²

"Global Disease Burden" was defined for the first time by the World Health Organization.^{13,14} Today, the focus of burden also applies to the individual disease

Correspondence: Charles Taieb
Tel +33 771 772 100
Email charles.taieb@emmaclinic

submit your manuscript | www.dovepress.com/
Dovepress | <https://www.dovepress.com/>
https://doi.org/10.2147/CID.S249114

Clinical, Cosmetic and Investigational Dermatology 2020:13 325–332

325

© 2020 Ezzedine et al. This work is published and licensed by Dove Medical Press Limited. The full terms of this license are available at <http://www.dovepress.com/terms.php> and incorporate the Creative Commons Attribution – Non Commercial (ajournal, cc) License (<http://creativecommons.org/licenses/by-nc/4.0/>). By accessing the work you hereby accept the Terms. Non-commercial use of this work is permitted without any further permission from Dove Medical Press Limited, provided the work is properly attributed. For permission for commercial use of the work, please see <http://www.dovepress.com/terms.php>.

burden, comprising psychological, social, economic, and physical features. In psoriasis, infantile haemangioma, hereditary ichthyoses, atopic dermatitis, vitiligo, albinism and palmoplantar keratoderma, individual disease burden has already been evaluated.^{15–21}

According to our literature search, no specific instrument exists to assess the burden experienced by psoriasis patients. However, such a tool may be useful for both patients and clinicians in charge of patient management. This instrument may, firstly, help to describe patient perceptions and, secondly, allow monitoring any changes in medical and non-medical care.

The aim of the present work was to build a self-administered tool allowing assessing the individual disease burden in psoriasis patients.

Methodology

Compiling this self-administered questionnaire did not require the approval of national health authorities. The work received approval from the national Ethics committee in July 2018. According to French regulations, no written informed consent was to be obtained from participating patients.

The tool was built following a standard methodology for creating QoL questionnaires.²² A group of experts in the design and development of questionnaires, such as health-care professionals (physicians and public-health specialists) as well as medical experts in psoriasis were created to validate the questionnaire.

A question and answer format was used. The response format followed a 7-point Likert scale: “never” (0), “rarely” (1), “sometimes” (2), “often” (3), “very often” (4), “constantly” (5) “not concerned” (0). The majority of all questions included the wording “due to my psoriasis”. This was to avoid any confusion with changes in perception due to symptoms related to comorbidities.

Conception

Prior to building the questionnaire, the authors conducted a literature research on PubMed to identify published work about questionnaires or scoring systems related to psoriasis. The authors performed several interviews with dermatologists, patient-reported outcome (PRO) experts, and psoriasis patients to collect the perception and complaints of patients as well as data for the initial wording. Based on the wording reports a list of features was prepared. These features were reformulated as easy-to-understandable questions.

Interviews ensured a large recruitment and a coherent diversity of participants regarding their geographical location, age, and sociological status; questionnaires were used to clinically confirm psoriasis. The working group semantically analysed the initial phrasing and finalised the list of questions. If similarities were too strong then questions were combined.

As a result, a semi-structured “Individual Burden of Psoriasis (I-BOP)” questionnaire using closed-ended questions was built. This tool covered relationships with others, economic consequences, impact on work, impact on daily life, on sexuality and libido.

Development

The conceptual questionnaire was administered to a random sample of psoriasis patients selected at the author’s practice facilities. Questionnaires were analysed using an exploratory factor analysis to reveal latent constructs. Each feature was assigned to its respective domain or dimension.

Questions with a too low or too high inter-feature correlation (lower than 0.3 or higher than 0.9) were eliminated. A Keyser Meyer Odin (KMO) analysis was conducted ensuring an appropriate factor analysis (KMO over 0.4 for all features).

Moreover, an exploratory factor analysis was done using a promax rotation to determine the domain or dimension of each feature.²³ Features with a low factor loading (lower than 0.4) or a high cross factor loading (higher than 0.2) were excluded.

Validation

Internal validation

Features were tested for their the homogeneity in each dimension using the Cronbach’s alpha coefficient.²⁴ Higher scores (>0.7) suggest good homogeneity.

A confirmatory analysis for the higher-order factor was done in order to demonstrate the questionnaire’s unidimensionality. The model’s suitability was measured using several criteria, including the Bentler comparative fit index and the Bentler-Bonett non-normed fit index both were set at >0.90.²⁵ The root mean square error of approximation (RMSEA) was set at 0.05 or at the very least <0.08, with 0.05 being the confidence interval.

External Validation

All participants were asked to complete the 12-feature Short Form Health Survey (SF12), Dermatology Life

Quality Index (DLQI) questionnaire and Perceived Stress Scale (PSS).²⁶⁻²⁸ The SF12 is a short version of the SF-36.²⁹ Based on 12 questions, a physical composite score (PCS, SF-12P) and mental composite score (MCS, SF-12M) were calculated. The DLQI questionnaire assesses the impact of skin diseases and associated treatments on patient QoL in patients aged above 16 years. The PSS measures the perception of stress.

A Pearson correlation was calculated assessing the reliability between the I-BOP questionnaire and these 3 questionnaires.

All data were analysed using R software version 3.5.3 for Windows, with a significance level set at 0.05.

Test-Retest Validation

Test-retest analyses assess reproducibility. Participants completed the I-BOP questionnaire twice within a 2-week interval. Answers were compared and the reliability of measurements was confirmed.

Translation, Cross-Cultural Adaptation, and Cognitive Debriefing

A US English-language version according to the recommendations of the ISPOR task force was issued.³⁰ The different conception, development, and validation steps are summarized in (Table 1).

Results

Conception

The literature review identified 11 psoriasis-related questionnaires and scoring systems.³¹⁻⁴¹ Verbal exchanges and several face-to-face meetings took place between dermatologists, psychologists, social workers, and patient-reported outcome (PRO) experts. In addition, the perception and complaints regarding psoriasis of 20 participants served for the conception of the tool. As a result, an initial verbatim, leading to a 54-feature conceptual questionnaire was created. Questions were categorized into relationships with others, economic consequences, impact on work and impact on everyday life and formatted using the 7-answer Likert scale.

Development

In total, 377 patients who attended the author's clinics and patients of the Reso-Pso network were invited to test the conceptual questionnaire. Patients with psoriatic arthritis were not considered for statistical analyses. Thus, 208 patients were suitable for testing the tool.

Table 1 Principles of Good Practice for the Translation and Cultural Adaptation Process for Patient-Reported Outcomes (PRO) Measures

Stage	Details
Preparation	Evaluation of the source text from a linguistic and cultural point of view including definition of concepts
Forward translations	Forward translation into the required target language by two independent translators
Reconciliation	Comparison of the two forward translations to provide the best adapted and to produce a draft version of the text
Back translation	Translation of the draft forward translation back into the targeted language without reference to the original language
Back translation review	Comparison of the original text and the back translation to verify if changes are required to the draft forward version
Analysis and implementation of back translation review report	Analysis of the back translation review report to verify if changes are required to draft forward version
Pilot testing	Clinical review and cognitive debriefing
Review of cognitive debriefing or clinical review results	Review of results from the cognitive debriefing or clinical review to identify translation modifications necessary for improvement

Note: Data from Wild et al.³⁰

Once all questionnaires were collected and evaluated, the working group performed a semantic analysis of the initial conceptual questionnaire. Non-discriminating questions (questions for which more than 90% of the responders, regardless of sex or age, provided identical answers) and questions for which wording was considered non-pertinent were eliminated, resulting in an 18-feature questionnaire.

Following this selection, an inter-feature correlation matrix was created in order to compile a condensed questionnaire. Results from this matrix correlation eliminated 4 more questions which all presented with an inter-feature correlation factor of less than 0.3 or of more than 0.9, resulting in a 14-feature questionnaire.

Exploratory Factor Analysis

All KMO scores confirmed that the dataset is suitable for conducting an EFA (exploratory factor analysis).

The scree plot obtained through the EFA determined 2 pertinent dimensions (Figure 1).

Moreover, this analysis eliminated questions with a loading factor of less than 0.5 or with a cross factor of more than 0.25 (Table 2). As a result, 4 more questions were eliminated from the questionnaire, leading to a 10-feature questionnaire. The semantic analysis identified 2 domains: "personal perception", covering 6 questions and "perception of others" covering 4 questions (Figure 2).

Validation

The resulting 10-feature questionnaire was distributed together with SF-12, DLQI and PSS questionnaires to 623 patients attending the authors' facilities and members of the Reso-Pso network; answers from patients with psoriatic arthritis were not considered. Thus, 550 psoriasis patients participated in this internal validation.

Internal Validation

The higher-order factor analysis resulted in a practical suitability index of 0.845404, with a Bentler comparative fit index (CFI) of 0.0.8644876, Bentler-Bonett non-normed fit index of 0.8549433, and an RMSEA index of 0.1444259

(95% CI [0.1323132; 0.1568747]). Based on these indicators and according to Kenny and McCoach, the model was proven to be correctly adjusted and suitable; the 2 dimensions could be grouped together into one single overall score.⁴²

The Cronbach's alpha coefficient was 0.9 for the entire questionnaire, confirming its excellent internal coherence.

External Validation

The questionnaire highly correlated with the SF-12 (SF-12P: -0.12 and SF-12M: -0.49), DLQI (0.77) and PSS (0.47) questionnaires.

Test-Retest Analysis

The test-retest reliability was made by 58 participants at Day 0 and Day 10; 47 usable test results were obtained; for 11 participants only the questionnaire for Day 0 was collected. Reproducibility was very good; the intra-class correlation of each dimension exceeded 85% for each domain, the total intra-class correlation (ICC) score was 0.98 with a CI 95% of [0.952, 0.991]. A first scale ICC reached 0.986 with a CI 95% of [0.969, 0.994] and the second scale ICC was 0.959 with a CI 95% of [0.91, 0.984].

Cognitive Debriefing, Translation, and Cross-Cultural Adaptation

Cognitive debriefing required no changes of the wording. The original French version was translated and underwent

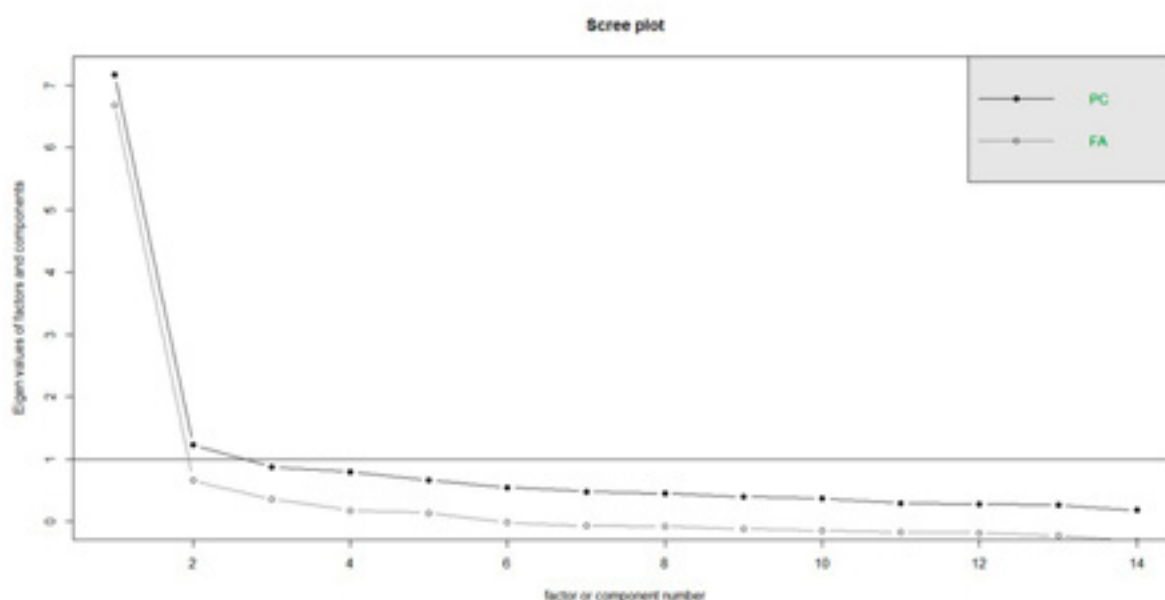


Figure 1 Exploratory factor analysis: scree plot. The scree plot served to determine the number of dimensions.

Abbreviations: FA, factor analysis; PC, principal component.

Table 2 Exploratory Factor Analysis: Questions with a Loading Factor of Less Than 0.5 or with a Cross Factor of More Than 0.25

	MR1	MR2
Question 1	0.38	0.27
Question 2	0.85	-0.03
Question 3	-0.15	0.77
Question 4	-0.13	0.87
Question 5	0.82	-0.19
Question 6	0.64	0.06
Question 7	0.73	0.05
Question 8	0.19	0.42
Question 9	0.08	0.59
Question 10	0.06	0.64
Question 11	0.50	0.33
Question 12	0.55	0.29
Question 13	0.44	0.40
Question 14	0.92	-0.06

Abbreviation: MR, minimum rank.

linguistic and cultural validation into US English. The final, validated version is given in (Table 3).

Scoring

Summing up scores for each of the 10 questions allowed calculating the total tool score. This was defined in the

forementioned method description, with “never” or “not applicable” scoring 0, “rarely” 1, “sometimes” 2, “often” 3, “very often” 4, and “constantly” 5 and with an I-BOP total score of “0” = no impact to “70” = highest possible impact.

Discussion and Conclusion

Psoriasis impacts independently of its severity on the patient’s lifestyle and QoL.⁴³ To the best of our knowledge, to date, no tool exists assessing the overall burden of psoriasis patients. Here we provide an easy-to-use tool allowing assessing the individual psoriasis burden. It is currently available in French and US English.

This newly developed burden assessment tool is robust with an internal consistency exceeding the minimum reliability criterion of 0.90 for an individual analysis.

The issue of individual disease burden is increasingly investigated especially for chronic skin diseases known for psychosocially affecting the patient. It is well established that “Individual burden” is responsible for disability caused by diseases. It covers psychological, physical, social, and economic factors, impacting QoL, social interaction, everyday life, and medical care. Using questionnaires allows evaluating this burden.^{15-17,19,22}

Advances made in QoL research over the last decades allowed health-care givers and regulatory agencies facing

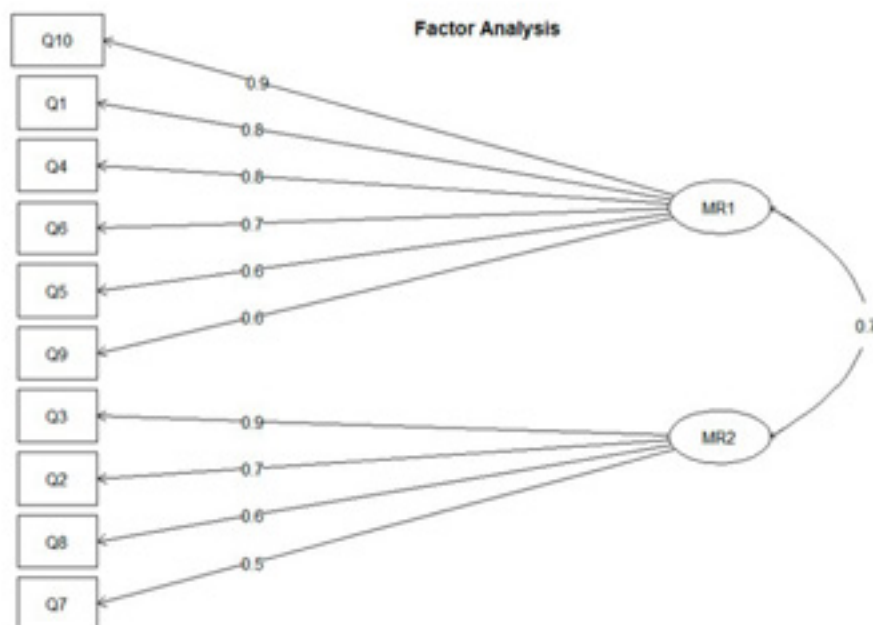


Figure 2 Exploratory factor analysis: Semantic analysis. The exploratory factor analysis allowed determining of domains: Domain 1 (MR1): own perception and Domain 2 (MR2): perception of others.

Table 3 10-Feature I-BOP Questionnaire

	Always	Very Often	Often	Sometimes	Rarely	Never	Not Applicable
Have you felt that your psoriasis is an aesthetic burden?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you worry about your psoriasis flaring up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you worried that the marks or scars will be permanent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has your psoriasis made you angry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt discouraged because of your psoriasis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been unhappy with your appearance because of your psoriasis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In your opinion, has your psoriasis had an impact on your sex life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt tired because of your psoriasis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you found it hard to work because of your psoriasis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you found it difficult to concentrate because of your psoriasis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

multifaceted situations.¹⁶ In this context, Cohen et al prepared recommendations for basing all health-related QoL claims on rigorously designed studies.²⁷ The use of QOL questionnaires in clinical research is more and more frequent to achieve market access.¹⁹

In conclusion, the I-BOP questionnaire is a reliable tool. It may help to better appreciate the multidimensional nature of psoriasis. Moreover, it may help to better understand the individual burden of psoriasis patients and as such may play a key role in the decision-making process. Additional research to develop a version of the instrument for children in the near future is ongoing.

Acknowledgments

The authors acknowledge the support of the French Association of Psoriasis Patients Réso Pso, the participating patients and physicians, and the writing assistance of Karl Patrick Göritz, SMWS Scientific and Medical Writing Services.

Funding

This study was funded by Laboratoire Pharmaceutique Lilly France.

Disclosure

Dr Anne Claire Fougereousse is advisory board for Abbvie, Eli-Lilly, Janssen Cilag, and Novartis; speaker for from Celgene and UCB. Dr Ziad Reguiai reports grants, personal fees from Lilly, Abbvie, Celgene, Janssen-Cilag,

Novartis, Leo Pharma, UCB, Pfizer. Dr Francois Maccari reports grants from Janssen, Novartis, Abbvie, and Lilly. The authors report no other conflicts of interest in this work.

References

- Myers WA, Gottlieb AB, Mease P. Psoriasis and psoriatic arthritis: clinical features and disease mechanisms. *Clin Dermatol*. 2006;24(5):438–447. doi:10.1016/j.clindermatol.2006.07.006
- Green L, Meyers OL, Gordon W, Briggs B. Arthritis in psoriasis. *Ann Rheum Dis*. 1981;40(4):366–369. doi:10.1136/ard.40.4.366
- Eder L, Haddad A, Rosen CF, et al. The incidence and risk factors for psoriatic arthritis in patients with psoriasis: a prospective cohort study. *Arthritis Rheumatol*. 2016;68(4):915–923. doi:10.1002/art.39494
- Reich K. The concept of psoriasis as a systemic inflammation: implications for disease management. *J Eur Acad Dermatol Venereol*. 2012;26(Suppl 2):3–11. doi:10.1111/j.1468-3083.2011.04410.x
- Gelfand JM, Neimann AL, Shin DB, Wang X, Margolis DJ, Troxel AB. Risk of myocardial infarction in patients with psoriasis. *JAMA*. 2006;296(14):1735–1741. doi:10.1001/jama.296.14.1735
- Khoury LR, Danielsen PL, Skiveren J. Body image altered by psoriasis. A study based on individual interviews and a model for body image. *J Dermatol Treat*. 2014;25(1):2–7. doi:10.1080/08954666.2012.739278
- Mease PJ, Metzger MA. Quality-of-life issues in psoriasis and psoriatic arthritis: outcome measures and therapies from a dermatological perspective. *J Am Acad Dermatol*. 2006;54(4):685–704. doi:10.1016/j.jaad.2005.10.008
- Dommasch ED, Li T, Okereke OI, Li Y, Qureshi AA, Cho E. Risk of depression in women with psoriasis: a cohort study. *Br J Dermatol*. 2015;173(4):975–980. doi:10.1111/bjd.14032
- Dowlatabadi EA, Wakkoo M, Arends LR, Nijsten T. The prevalence and odds of depressive symptoms and clinical depression in psoriasis patients: a systematic review and meta-analysis. *J Invest Dermatol*. 2014;134(6):1542–1551. doi:10.1038/jid.2013.508

10. Sampogna F, Tebollo S, Abeni D. Living with psoriasis: prevalence of shame, anger, worry, and problems in daily activities and social life. *Acta Derm Venereol*. 2012;92(3):299–303. doi:10.2340/00015555-1273
11. Fontaine DG, Richards HL, Kirby B, et al. Psychological distress impairs clearance of psoriasis in patients treated with phototherapy. *Arch Dermatol*. 2003;139(6):752–756. doi:10.1001/archderm.139.6.752
12. Nicholas MN, Gooderham M. Psoriasis, depression, and suicidality. *Skin Therapy Lett*. 2017;22(3):1–4.
13. Dalgard FJ, Gieler U, Tomas-Angones L, et al. The psychological burden of skin diseases: a cross-sectional multicenter study among dermatological out-patients in 13 European countries. *J Invest Dermatol*. 2015;135(4):984–991. doi:10.1038/jid.2014.530
14. WHO. About the global burden of disease (GBD) project 2010. [cited April 05, 2019]. Available from: https://www.who.int/healthinfo/global_burden_disease/about/en/. Accessed September 05, 2019.
15. Meyer N, Paul C, Feron D, et al. Psoriasis: an epidemiological evaluation of disease burden in 590 patients. *J Eur Acad Dermatol Venereol*. 2010;24(9):1075–1082. doi:10.1111/j.1468-3083.2010.03600.x
16. Boccaro O, Meni C, Lesute-Labreze C, et al. Haemangioma family burden: creation of a specific questionnaire. *Acta Derm Venereol*. 2015;95(1):78–82. doi:10.2340/00015555-1847
17. Dufresne H, Hadj-Rabia S, Méni C, Sibaud V, Bodemer C, Taieb C. Family burden in inherited ichthyosis: creation of a specific questionnaire. *Orphanet J Rare Dis*. 2013;8:28. doi:10.1186/1750-1172-8-28
18. Taieb A, Bonlevi F, Seneschal J, et al. Atopic dermatitis burden scale for adults: development and validation of a new assessment tool. *Acta Derm Venereol*. 2015;95(6):700–705. doi:10.2340/00015555-1945
19. Salzes C, Abadie S, Seneschal J, et al. The vitiligo impact patient scale (VIPs): development and validation of a vitiligo burden assessment tool. *J Invest Dermatol*. 2016;136(1):52–58. doi:10.1038/JID.2015.398
20. Morice-Picard F, Taieb C, Marti A, et al. Burden of albinism: development and validation of a burden assessment tool. *Orphanet J Rare Dis*. 2018;13(1):162. doi:10.1186/s13023-018-0894-3
21. Hickman G, Bodemer C, Bourrat E, Benznani M, Taieb C. Palmoplantar keratoderma: creating a disease burden questionnaire. *J Eur Acad Dermatol Venereol*. 2019;33(8):e291–e293. doi:10.1111/jdv.15563
22. Seidenberg M, Haltiner A, Taylor MA, Hermann BB, Wyler A. Development and validation of a multiple ability self-report questionnaire. *J Clin Exp Neuropsychol*. 1994;16(1):93–104. doi:10.1080/01688639408402620
23. Kaiser HF. The varimax criterion for analytic rotation in factor analysis. *Psychometrika*. 1958;23(3):187–200. doi:10.1007/BF02289233
24. Cronbach LJ. Coefficient alpha and the internal structure of tests. *Psychometrika*. 1951;16(3):297–334. doi:10.1007/BF02310555
25. Bentler PM. Comparative fit indexes in structural models. *Psychol Bull*. 1990;107(2):238–246. doi:10.1037/0033-2909.107.2.238
26. Lim LL, Fisher JD. Use of the 12-item short-form (SF-12) health survey in an Australian heart and stroke population. *Qual Life Res*. 1999;8(1–2):1–8. doi:10.1023/A:1026409226544
27. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *J Health Soc Behav*. 1983;24(5):385–396. doi:10.2307/2136904
28. Fitzlay AY, Khan GK. Dermatology life quality index (DLQI)—a simple practical measure for routine clinical use. *Clin Exp Dermatol*. 1994;19(3):210–216. doi:10.1111/j.1365-2230.1994.tb01167.x
29. Brazier JE, Harper R, Jones NM, et al. Validating the SF-36 health survey questionnaire: new outcome measure for primary care. *BMJ*. 1992;305(6846):160–164. doi:10.1136/bmj.305.6846.160
30. Wild D, Grove A, Martin M, et al. Principles of good practice for the translation and cultural adaptation process for patient-reported outcomes (PRO) measures: report of the ISPOR task force for translation and cultural adaptation. *Value Health*. 2005;8(2):94–104. doi:10.1111/j.1524-4733.2005.04054.x
31. Ramsay B, Lawrence CM. Measurement of involved surface area in patients with psoriasis. *Br J Dermatol*. 1991;124(6):565–570. doi:10.1111/j.1365-2133.1991.tb04952.x
32. Langley RG, Feldman SR, Nytrady J, van de Kerkhof E, Papavasiliou C. The 5-point investigator's global assessment (IGA) scale: a modified tool for evaluating plaque psoriasis severity in clinical trials. *J Dermatol Treat*. 2015;26(1):23–31. doi:10.3109/09546634.2013.865009
33. Fredriksson T, Pettersson U. Severe psoriasis—oral therapy with a new retinoid. *Dermatologica*. 1978;157(4):238–244. doi:10.1159/000250839
34. Fitzlay AY. Quality of life assessments in dermatology. *South Asian Med Surg*. 1998;17(4):291–296. doi:10.1016/S1085-5629(98)80026-6
35. Gupta MA, Gupta AK. Psychiatric and psychological co-morbidity in patients with dermatologic disorders: epidemiology and management. *Am J Clin Dermatol*. 2003;4(12):833–842. doi:10.2165/00128071-200304120-00003
36. Bhushan M, Burden AD, McElhone K, James R, Vanhoose FP, Griffiths CE. Oral lixazole in the treatment of palmoplantar pustular psoriasis: a randomized, double-blind, placebo-controlled study. *Br J Dermatol*. 2001;145(4):546–553. doi:10.1046/j.1365-2133.2001.04411.x
37. Koo J, Menter A, Lebwohl M, et al. The relationship between quality of life and disease severity: results from a large cohort of mild, moderate and severe psoriasis patients. *Br J Dermatol*. 2002;147:1077–1079.
38. McKenna SP, Doward LC, Whalley D, Tezzart A, Emery P, Veale DJ. Development of the PsAQoL: a quality of life instrument specific to psoriatic arthritis. *Ann Rheum Dis*. 2004;63(2):162–169. doi:10.1136/ard.2003.006296
39. Bushnell DM, Martin ML, McCarrier K, et al. Validation of the psoriasis symptom inventory (PSI), a patient-reported outcome measure to assess psoriasis symptom severity. *J Dermatol Treat*. 2013;24(5):356–360. doi:10.3109/09546634.2012.742950
40. Mathias SD, Feldman SR, Crosby RD, Colwell HHL, McQuarrie K, Han C. Measurement properties of a patient-reported outcome measure assessing psoriasis severity: the psoriasis symptoms and signs diary. *J Dermatol Treat*. 2016;27(4):322–327. doi:10.3109/09546634.2015.1114567
41. Gilet H, Roborel de Climens A, Arnould B, et al. Development and psychometric validation of the reflective evaluation of psoriasis efficacy of treatment and severity (REFLETS) questionnaire: a common measure of plaque-type psoriasis severity and treatment efficacy for patients and clinicians. *J Eur Acad Dermatol Venereol*. 2015;29(3):498–506. doi:10.1111/jdv.12601
42. Kenny DA, McCoach DB. Effect of the number of variables on measures of fit in structural equation modeling. *Struct Equ Modeling*. 2003;10(3):333–351. doi:10.1207/S15328007SEM1003_1
43. Garcia-Sanchez L, Montiel-Jarquín AJ, Vazquez-Cruz E, May-Salazar A, Gutierrez-Gabriel I, Loria-Castellanos J. [Quality of life in patients with psoriasis]. *Gac Med Mex*. 2017;153(2):185–189. Spanish

Contraception, Sexuality and Pregnancy in Women with Psoriasis: Real-Life Experience of 235 Women

This article was published in the following Dove Press journal:
Clinical, Cosmetic and Investigational Dermatology

François Maccari^{1,2}
Anne Claire Fougerousse^{2,3}
Ziad Reguiai^{2,4}
Charles Taieb^{5,6}

¹Private Practice, La Varenne St Hilaire, Paris, France; ²Reso Pso, Dermatologist Network, Paris, France; ³Military Teaching Hospital Bégin, Saint Mandé, Paris, France; ⁴Service De Dermatologie, Polyclinique Courclancy, Reims, France; ⁵RIMARAD, Hôpital Necker Enfants Malades, Paris, France; ⁶European Market Maintenance Assessment, Vincennes, Paris, France

Background: Little is known about how women of childbearing age with psoriasis experience contraception, sexuality and pregnancies through the lens of their skin condition.

Objective: To evaluate the experiences and expectations in this group of patients.

Materials and Methods: In total, 235 women aged between 18 and 45 years old completed an online survey. We collected the characteristics of psoriasis, contraception and pregnancy history. Psoriasis severity was measured using the Simplified Psoriasis Index. Patient quality of life was assessed using the Dermatology Life Quality Index (DLQI) and the Short Form-12.

Results: Psoriasis was mild in 78% of cases. The mean DLQI score was 8.8, highlighting a moderate impact of psoriasis. In total, 28% of the women had no current follow-ups, while at least two distinct physicians followed 21% of these patients. In total, 31.5% of the women felt that they could discuss sexuality during their consultations. In addition, 63% of respondents had a contraceptive method, but more than half of the women reported that contraception was rarely or never discussed during the consultations. In total, 63% had at least one pregnancy, and 61.5% reported that the doctor managing their psoriasis did not discuss their pregnancy during consultations. Psoriasis worsened during pregnancy for 21% of the respondents but improved in 34%. Among women who were not pregnant, less than 15% reported that the doctor in charge of their psoriasis discussed family planning and pregnancy possibilities.

Conclusion: Our study shows that the management of women of childbearing age with psoriasis must be improved with respect to sexuality, contraception and pregnancy planning.

Keywords: psoriasis, women, childbearing

Introduction

Women between 18 and 45 years old represent more than one-fourth (26.2%) of the French population with psoriasis.¹ Based on data from the National Institute of Statistics and Economic Studies (INSEE, Institut national de la statistique et des études économiques, January 2018), we estimated that the prevalence of psoriasis in this group of the general population was 4.7% (726,000 women). The impact of pregnancy on psoriasis is well known, but the impact of psoriasis among pregnant women has not been evaluated. In a previous study, we reported that 26% of women with psoriasis who are seen by a dermatologist are of childbearing age and therefore likely to be pregnant.² Women are mostly interested in knowing about treatment compatibility with pregnancy, risks to the foetus and the risk of disease transmission.² In the present study, we sought to investigate the real-life experience of these female psoriasis patients with respect to contraception, sexuality and pregnancy.

Correspondence: Charles Taieb
Email: charles.taieb@emma.clinic

Submit your manuscript | www.dovepress.com/
Dovepress | [f](#) [t](#) [in](#) [v](#)
<https://doi.org/10.2147/CID.C127512>

Clinical, Cosmetic and Investigational Dermatology 2020:13 817–823

817

© 2020 Picaut et al. This work is published and licensed by Dove Medical Press Limited. The full terms of this license are available at <http://www.dovepress.com/terms.php> and incorporate the Creative Commons Attribution – Non Commercial (unported), v4.0) License (<http://creativecommons.org/licenses/by-nc/4.0/>). By accessing this work, you hereby accept the Terms, Conditions and Notices associated with this work, as posted without any further permission from Dove Medical Press Limited, provided the work is properly attributed. For permission to reproduce this work, please see paragraphs 42 and 43 of our Terms (<http://www.dovepress.com/terms.php>).

Materials and Methods

Study Population

A polling institute (HC Conseil Paris, France) conducted the survey between December 2019 and January 2020 in accordance with local legislation. From a database containing the e-mail addresses of 900,000 Internet users who agreed to participate in different surveys (Megabasekantar), we first built a representative sample of the French population stratified by age, geographical area of residence and income, and among them, we identified individuals who self-reported suffering from psoriasis. Finally, among those people, we identified women who were of childbearing age between 18 and 45 years old (Figure 1). Each participant agreed to provide answers to a digital questionnaire, including questions regarding their health and skin diseases. Given the prevalence of psoriasis in France (4.42%)¹ and the prevalence of psoriasis among women of childbearing age (4.69%),¹ it was necessary to interview approximately 200 women (Figure 1).

This study used completely anonymized data and did not involve patient contact, so institutional review board approval was not required.

However, before answering the questionnaire, each respondent was informed of the nature of the survey, that anonymity would be respected and that no collected information that would allow any identification.

The respondent could stop answer at the questionnaire at the time of her choice without any explanation.

By answering the questionnaire, the respondent was confirming his or her agreement, completion of the survey deemed to be informed consent.

Survey

The survey included questions about sociodemographic data (gender, age, occupation/social class, area of residence), psoriasis history and management, contraception methods and past or present pregnancies. The respondents had to answer seven assertions about psoriasis and pregnancy and acknowledge whether they knew the correct answers.

Quality of Life

Quality of life (QoL) was assessed using two self-reported questionnaires: the 12-Item Short-Form Health Survey (SF-12®),³ which is a non-skin-specific questionnaire; and the Dermatology Life Quality Index (DLQI).⁴ The SF12 is a multipurpose short-form survey with 12 questions, which are selected from the SF-36 Health Survey. The questions are combined, scored, and weighted to create two scales that provide glimpses into mental and physical functioning and overall health-related QoL. This survey provides a generic measure regardless of any specific age or disease group and was developed to provide a shorter but valid alternative to the SF-36, which many health researchers consider to be too long to administer in studies with large samples. The SF-12 is weighted and totalled to provide easily interpretable scales for physical and mental health. Physical and mental health composite scores are computed using the scores of 12 questions and range from 0 to 100, with a score of zero indicating the lowest level of health measured by the scales and 100 indicating the highest level of health.³

Simplified Psoriasis Index patient self-assessment^{5,6}

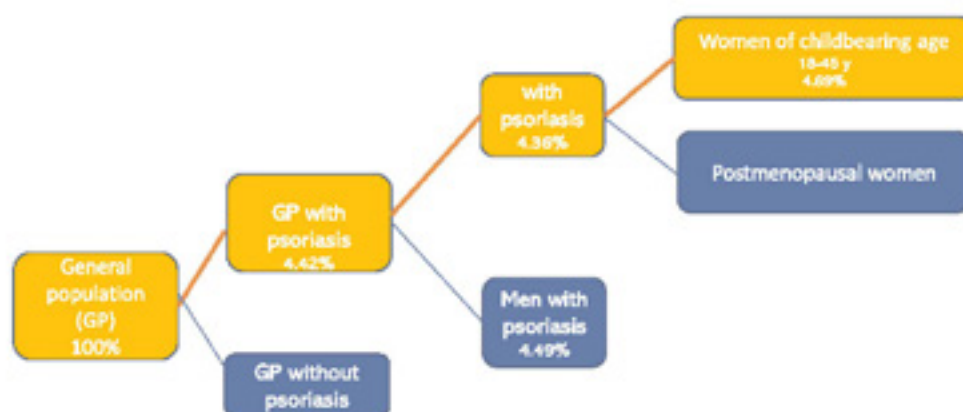


Figure 1 Flowchart of the study.

The Simplified Psoriasis Index (SPI) is a new score for the global assessment of psoriasis severity,⁵ and a French version of this assessment was recently validated.⁶ The SPI was derived from the Salford Psoriasis Index, but the Psoriasis Area and Severity Index (PASI) has been replaced with a composite weighted severity score designed to reflect the functional and psychosocial impact of psoriasis affecting important body sites. The SPI specifically assesses the critical locations of psoriasis (scalp, face, hands, feet, and anogenital area) and includes a section on the psychosocial impact and history. It includes 3 distinct domains: current severity of skin disease (SPI-s), psychosocial impact (SPI-p) and past history and interventions (SPI-i). The three domains are presented as three separate scores: SPI-s (0–50), SPI-p (0–10) and SPI-i (0–10). We used here the patient self-assessed version. The patients were also asked to evaluate the extent to which psoriasis bothers their daily lives at the current time using a numeric scale ranging from 0 (for “my psoriasis does not bother me”) to 10 (for “my psoriasis bothers me greatly”).

Knowledge of the Disease

In this project, several assertions were proposed, each of which required patients to express themselves about the truthfulness of the assertion.

These assertions are common (eg, transmission of the disease, treatment during pregnancy, and impact of pregnancy on psoriasis) and were identified on the patient association’s website (www.francepsoriasis.org). Since the current validated questionnaires did not allow us to address all of the questions that we thought were relevant, we created specific questions that did not undergo the validation process.

Statistical Analyses

Statistical analyses were performed using R software, version 3.5.1, which is available on the Internet. Percentages were computed for categorical variables. Given that our objective was to describe the situation to impact future educative programmes and awareness campaigns, we did not perform any comparisons between subgroups.

Results

Overall, 235 women responded to the questionnaires, including two incomplete questionnaires. The following

age distribution for 233 patients was observed: 46% (n=108) 35–44 years old, 38.5% (n=88) 25–34 yo and 15.7% (n=37) 18–24 yo. The characteristics of the respondents are summarized in Table 1.

Psoriasis

In total, 46% of women had at least one parent with psoriasis. Seven percent of the significant partners had psoriasis. Psoriasis was severe in 8% (n=18), moderate in 14% (n=34) and mild in 78% (n=183). In addition, 33% of respondents reported having psoriatic arthritis.

Apart from psoriasis, 36% (n=81) reported an additional skin disease, and 14% (n=32) reported two additional skin diseases, including acne (26%, n=59), contact eczema (22%, n=48), atopic dermatitis (15%, n=33), scalp disease (18%, n=41) and vitiligo (4%, n=8).

Diagnosis and Follow-Up

The mean age at diagnosis was 22±9 years old. Psoriasis was diagnosed by a dermatologist in 66% (n=144) of the cases and by a general practitioner (GP) in 32% (n=70). Approximately 55% of the respondents (n=129) consulted a dermatologist within the past 12 months, including 15% (n=35) within the past month. In contrast, 8% (n=19) never consulted a dermatologist. GPs and dermatologists were the referents for psoriasis in 39% (n=106) and 36% (n=97) of the respondents, respectively. One of five women was followed by both. The dermatologists were mostly private based (63% of the cases). Twenty-four percent (n=65) had no current follow-up.

Quality of Life

The mean DLQI score was 8.8±6.5, highlighting a moderate impact of psoriasis. The physical dimension of the SF-12 did not show significant alteration (mean value 50.9±8.3) in contrast to the mental dimension of the SF-12, which showed an alteration with a score far less than 50 (36.7±2.5).

On a scale of 0 (for “my psoriasis does not bother me”) to 10 (for “my psoriasis bothers greatly”), the mean score obtained was 5.8 ± 2.5.

Contraceptive Methods

Sixty-three percent (n = 149) currently used a contraception method, mainly a contraceptive pill (38%, n=90), intrauterine device (17%, n = 26) or implant

Table 1 Characteristics of Patients with Psoriasis Based on Pregnancy Status

	Total N=235 (%)	Without Pregnancy n=86 (%)	With Pregnancy n=149 (%)	Pearson's Chi-Squared Test
Age group (years)				
18-24	37 (15)	32 (37)	5 (3)	p-value < 0.001
25-34	88 (37)	32 (37)	56 (38)	
35-44	108 (46)	21 (24)	87 (58)	
Missing data	2 (1)	1 (1)	1 (1)	
Family history of psoriasis				
Yes	116 (49)	43 (50)	73 (49)	NS
Psoriasis severity				
Mild	183 (78)	68 (79)	115 (77)	NS
Moderate	34 (14)	11 (13)	23 (15.5)	
Severe	18 (8)	7 (8)	11 (7.5)	
Who diagnosed psoriasis				
General practitioner	70 (32)	24 (28)	46 (31)	NS
Dermatologists	144 (66)	49 (57)	95 (64)	
Other specialist	3 (1)	1 (1)	2 (1)	
Who follows the patient				
General practitioner	106 (45)	27 (31)	79 (53)	p-value: 0.001
Dermatologist, hospital	36 (15)	11 (13)	25 (17)	NS
Dermatologist, private	61 (26)	19 (22)	42 (28)	NS
Other specialist	3 (1)	2 (2)	1 (1)	NS
No follow-up	45 (28)	36 (42)	29 (19)	p-value 0.0002
Physician is a woman	94 (40)	28 (56)	66 (55)	p-value: 0.067
Psoriasis distribution				
Scalp	158 (67)	63 (73)	95 (64)	NS
Head and neck	97 (41)	43 (50)	54 (36)	NS
Arms and armpits	99 (42)	30 (35)	69 (46)	p-value: 0.047
Hands, fingers, nails	86 (37)	25 (29)	61 (41)	p-value: 0.039
Trunk	65 (28)	19 (22)	46 (31)	p-value: 0.039
Back and shoulders	65 (28)	16 (19)	49 (33)	p-value: 0.010
Genitals, anus	46 (20)	17 (20)	29 (19.5)	NS
Buttocks, thighs	57 (24)	22 (26)	35 (23.5)	NS
Knee, legs, ankles	72 (31)	20 (23)	52 (35)	p-value: 0.038
Feet, toes, nails	71 (30)	22 (26)	49 (33)	NS
Other dermatoses				
Acne	59 (59)	22 (27)	37 (29)	NS
Contact eczema	48 (20)	12 (14)	36 (24)	NS
Atopic dermatitis	33 (14)	13 (15)	20 (13)	NS
Vitiligo	8 (3)	2 (2)	6 (4)	NS
Scalp disorder	41 (17)	19 (22)	22 (15)	NS
Quality of life				
DLQI	8.8±6.5	7.4±6.2	9.6 ± 6.6	Non-clinically relevant difference
SF-12 (physical)	50.9±8.3	53.0±8.6	49.8± 7.9	
SF-12 (mental)	36.7±2.5	35.3±8.9	37.5± 8.9	
Psoriasis bothers me	5.8 ± 2.5	5.2±2.7	6.1±2.2	

(6%, n=9). Other methods were rarely used (0% to 3%). Ninety-three percent (n = 138) reported being confident in the effectiveness of their contraceptive method. Thirty-one percent (n = 46/149) stated that contraception use was discussed regularly during consultations, while it was rarely or never discussed in 54% (n=81) of cases. Thirty-two percent acknowledged that sexuality was discussed during consultations. Physician gender was not significantly associated with discussion during consultations. Twelve women (5.1%) were undergoing menopause.

Pregnancy Planning

Thirteen (n=11) and 14% (n=12) of the women without pregnancy reported that the physician treating their psoriasis broached child planning and pregnancy, respectively. Seventy percent (n = 60) did not talk about their psoriasis with their gynaecologist, and 13% (n = 11) did not have a gynaecologist. Eight percent (n = 7) were concerned that psoriasis influenced their pregnancy plans, and 12% (n=10) were concerned that psoriasis treatment interfered with pregnancy. Fifty-two percent (n = 45) and 44% (n=38) were not concerned "at all" that their psoriasis or psoriasis treatment would affect their future pregnancy, respectively (Table 2).

Pregnancies

One hundred forty-nine women (63%) reported at least one pregnancy, and 18 (7.6%) were currently pregnant. The mean age of the women at birth of the first child was 24.9±4.7 years old. Of the 149 patients who had at least one pregnancy, the pregnancy was full term in 97.3% (n=145). Psoriasis is or was a moderate to enormous concern for 25% of respondents (n=37) during pregnancy, and 61.5% (n=91) reported that the physician managing their psoriasis did not talk about the pregnancy during consultations. In addition, 36% (n=20) discussed their concerns with their gynaecologist.

In total, only one out of every two women [52% (n=77)] discussed this subject with at least one physician (including dermatologists and gynaecologists), and 37% (n=56) of patients stopped their treatment for psoriasis during pregnancy. The most frequently withdrawn treatment was UVB and UVA phototherapy (20% of respondents), methotrexate (18%), retinoids and cyclosporine (7% both), and biologics (3.6%). Local treatments were also stopped in 37.5% of cases.

Table 2 Concerns for Women Psoriasis Regarding Pregnancy

	N (%)
If you are pregnant, are you concerned that your psoriasis may interfere with your pregnancy?	
Not at all	45 (52)
A little bit	22 (26)
Mildly	12 (14)
A lot	4 (5)
Enormously	3 (3.5)
If you are pregnant, are you concerned that treatment of your psoriasis may interfere with your pregnancy?	
Not at all	38 (44)
A little bit	23 (27)
Mildly	15 (17)
A lot	7 (8)
Enormously	3 (3.5)
If you are pregnant, are you afraid of the consequences of your psoriasis on your child?	
Not at all	29 (34)
A little bit	31 (36)
Mildly	16 (19)
A lot	4 (5)
Enormously	6 (7)
If you are pregnant, are you concerned about the consequences of treating your psoriasis on your child?	
Not at all	34 (39.5)
A little bit	24 (28)
Mildly	13 (15)
A lot	9 (10.5)
Enormously	6 (7)

Twenty-one percent of the respondents felt that psoriasis worsened during pregnancy, 34% felt that psoriasis improved during pregnancy, and 45% felt that psoriasis did not change during pregnancy. After pregnancy, 19% felt that psoriasis worsened after giving birth, 30% felt that psoriasis improved, and 51% felt that the psoriasis remained similar.

Knowledge of the Disease

The correct response rates to each of the questions are described in Table 3. None of the assertions had more than 60% correct answers.

Discussion

We report on the real-life experience of 235 women of childbearing age with psoriasis. Psoriasis had an overall

Table 3 Response Rate of Women Who Answered Correctly to the Following Statements About Psoriasis

	Without Pregnancy N=86 (%)	With Pregnancy N=149 (%)	Total N=235 (%)
If I have psoriasis, my child will have psoriasis too.	38 (44)	78 (52)	116 (49)
When one parent has psoriasis, the child has less than a one-in-five risk of developing the disease.	21 (24)	49 (33)	70 (30)
A pregnant woman cannot take any treatment for psoriasis.	22 (25)	43 (29)	65 (28)
Psoriasis can interfere with a healthy pregnancy.	27 (31)	60 (40)	87 (37)
Psoriasis can disappear during pregnancy.	24 (28)	56 (38)	80 (34)
You cannot breastfeed if you have psoriasis.	31 (36)	83 (56)	114 (48)
Psoriasis is not contagious, it does not transmit directly to the child.	48 (56)	93 (62)	141 (60)

mild impact on QoL in our cohort. Contraception and the sexuality of the patients were discussed in approximately one-third of cases. We previously reported on the difficulties of opening up and discussing sexuality with physicians.² In a study of 183 couples, we found that psoriasis severity and/or a significant impact on QoL were factors associated with sexual dysfunction in male partners of women with psoriasis, but the opposite scenario was not observed.⁷ Contraception in childbearing women with psoriasis is important, and therapeutic options must be considered for all women with psoriasis who are sexually active irrespective of intentions of starting a family.⁸ For example, acitretin, methotrexate, and oral psoralen/ultraviolet A are all contraindicated in pregnancy.⁷ Conversely, cyclosporine and anti-TNF alpha can be considered.^{9–11} Notably, a recent Italian study showed that women were less likely to receive biologics than men.¹²

Two-thirds of the patients already had at least one child. The majority of those without children were rather confident about the outcome of pregnancy. It is important to remind us that psoriasis is usually improved during pregnancy because of high oestrogen levels. Oestrogen might improve psoriasis by suppressing the T-cell immune response, reducing keratinocyte cytokine and chemokine production, restoring the balance of redox and enhancing the skin barrier.¹³ The greatest concern was about foetal risk under psoriasis therapy, with 17.5% of the women expressing concerns (much to enormous concern). However, up to 25% of pregnant patients reported concerns. This finding illustrates the difference in the state of mind between planning a pregnancy and being pregnant. In our previous study, dermatologists reported, that upon diagnosing women of childbearing age with psoriasis, they approached short-term desires of pregnancy (83.5%), contraception (68%), long-term desires of pregnancy (41%) and drug therapies

during pregnancy (35%).² Conversely, according to dermatologists, the main topics discussed by women included compatibility of therapy with pregnancy (64%), disease transmission (54%), foetal risks of therapy (49%), and contraception (32%).² However, in the present study, 13–14% of non-pregnant women reported that the physician managing their psoriasis discussed child planning and pregnancy. In addition, 61.5% of pregnant patients reported that the physician managing their psoriasis did not talk about the pregnancy during consultations. This strong discrepancy can be explained by the managing physician being either a dermatologist or a GP. In addition, the patients in this study were more often followed by a dermatologist in private practice (26%) than one from a hospital (15%). However, in our previous study,² the respondents were mainly hospital based (49%). We did not inquire here about short-term or long-term wishes.

Finally, we observed that the level of knowledge about psoriasis and pregnancy was rather low. For six of the seven statements, less than half of the women could provide the correct answer. For two statements, less than one-third of the women provided correct answers. The dearth of knowledge was more important among non-pregnant women. This finding seems logical because interest about the topic might be lower when a pregnancy is not planned.

Limitations of our survey include the small sample size of our cohort, a convenience sample that was not fully representative of the population, a lack of validated questionnaires, recollection bias given the self-reported nature of the study and the lack of a control group.

Conclusion

Patient associations have been calling for support for parental projects for many years. It is essential to ensure the health safety of both the woman and the child. With our study, we

wish to raise awareness among dermatologists to systematically address questions about sexuality and contraception with their patients during follow-ups. The development of therapeutic educative programmes is also warranted. Studies such as ours and future studies will help to improve the situation.

Our study showed that the management of women of childbearing age must be improved with regard to sexuality, contraception and pregnancy planning. It is important that the dermatologists managing these patients with psoriasis address these issues during consultations.

Funding

UCB Pharma.

Disclosure

The authors report no conflicts of interest for this work.

References

- Richard MA, Corgibet F, Beylot-Barry M, et al. Sex- and age-adjusted prevalence estimates of five chronic inflammatory skin diseases in France: results of the OBJECTIFS PEAU study. *J Eur Acad Dermatol Venereol*. 2018;32(11):1967–1971. doi:10.1111/jdv.14959
- Maccari F, Fougereuse AC, Esteve E, et al. Gem resopso and the AJDerm. Crossed looks on the dermatologist's position and the patient's preoccupations as to psoriasis and pregnancy: preliminary results of the PREGNAN-PSO study. *J Eur Acad Dermatol Venereol*. 2019;33(5):880–885. doi:10.1111/jdv.15423
- Ware J, Kosinski M, Keller SD. A 12-item short-form health survey: construction of scales and preliminary tests of reliability and validity. *Med Care*. 1996;34(3):220–233. doi:10.1097/00006560-199603000-00003
- Finlay AY. Quality of life assessments in dermatology. *Semin Cutan Med Surg*. 1998;17:291–296. doi:10.1016/S1083-5629(98)00026-6
- Chularojannamontri L, Griffiths CE, Chalmers RJ. The Simplified Psoriasis Index (SPI): a practical tool for assessing psoriasis. *J Invest Dermatol*. 2013;133(8):1956–1962. doi:10.1038/jid.2013.138
- Richard MA, Aractingi S, Joly P, et al. [French adaptation of a new score for global assessment of psoriasis severity: the Simplified Psoriasis Index (SPI)]. *Ann Dermatol Venerol*. 2019;146(12):783–792. doi:10.1016/j.annder.2019.08.004. original article was published in french.
- Halioua B, Maccari F, Fougereuse AC, et al. Impact of patient psoriasis on partner quality of life, sexuality and empathy feelings: a study in 183 couples. *J Eur Acad Dermatol Venereol*. 2020;34(9):2044–2050. doi:10.1111/jdv.16270
- Gottlieb AB, Ryan C, Murase JE. Clinical considerations for the management of psoriasis in women. *Int J Womens Dermatol*. 2019;5(3):141–150. doi:10.1016/j.ijwd.2019.04.021
- Bangsgaard N, Røbye C, Skov L. Treating psoriasis during pregnancy: safety and efficacy of treatments. *Am J Clin Dermatol*. 2015;16(5):389–398. doi:10.1007/s40257-015-0137-5
- Götestam Skopen C, Hoeltzenbein M, Tincani A, et al. The EULAR points to consider for use of antirheumatic drugs before pregnancy, and during pregnancy and lactation. *Ann Rheum Dis*. 2016;75(5):795–810. doi:10.1136/annrheumdis-2015-208840
- Cacciapuoti S, Scala E, Megna M, et al. Impact of current anti-psoriatic systemic treatments on male and female fertility: what the endocrinologist needs to know. *Minerva Endocrinol*. 2020. doi:10.23736/S0391-1977.20.03236-8
- Scala E, Megna M, Amerio P, et al. Patients' demographic and socioeconomic characteristics influence the therapeutic decision-making process in psoriasis. *PLoS One*. 2020;15(8):e0237267. doi:10.1371/journal.pone.0237267
- Lin X, Huang T. Impact of pregnancy and oestrogen on psoriasis and potential therapeutic use of selective oestrogen receptor modulators for psoriasis. *J Eur Acad Dermatol Venereol*. 2016;30(7):1085–1091. doi:10.1111/jdv.13661

Clinical, Cosmetic and Investigational Dermatology

Dovepress

Publish your work in this journal

Clinical, Cosmetic and Investigational Dermatology is an international, peer-reviewed, open access, online journal that focuses on the latest clinical and experimental research in all aspects of skin disease and cosmetic interventions. This journal is indexed on CAS.

The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/clinical-cosmetic-and-investigational-dermatology-journal>

PRÉSENTATIONS À DES CONGRÈS 2020

EHSF 2020 ATHENES

Hidradenitis suppurativa management using TNF inhibitors in patients under the age of 18 : a series of 12 cases

Anne-Claire Fougousse, Ziad Reguiai, Aude Roussel, Pierre-André Bécherel, pour le GEM ResoVerneuil

Use of internet by hidradenitis suppurativa patients : an observational study ResoVerneuil.net

Anne-Claire Fougousse, Germaine Gabison, Anne-Cécile Ezanno, Jean-Luc Perrot, Juliette Delaunay, Ziad Reguiai, François Maccari, Philippe Guillem

Which disease-related messages would patients with hidradenitis suppurativa tattoo on their skin ?

Philippe Guillem

Which factors are identified by the patients as influencers of hidradenitis suppurativa ?

Farida Benhadou, Axel Villani, Virginie Vlaeminck-Guillem, Philippe Guillem

Psychological support for hidradenitis suppurativa : semi-directive interview to assess psychological traits and psychosomatic aspects

Ermida Odidou, Nathalie Dumet, Philippe Guillem

Hey Doc ! I think I'm allergic to my sweat ! Fox-Fordyce as a diagnosis challenge of hidradenitis suppurativa

Farida Benhadou, Valérie Chade-Tremeau, Nelly Youssef-Provençal, Philippe Guillem

Ehlers-Danlos syndrome, a very rare condition associated to hidradenitis suppurativa

Farida Benhadou, Philippe Guillem

JOURNÉES PLAIES ET CICATRISATION 2020

Animation d'une session spéciale Resoverneuil :

Dr Aude Nassif, Dr Anne-Claire Fougousse, Dr Mickael Atlan

2ÈME RENCONTRE NATIONALE INRESA DES ACTEURS DE LA PLAIE STRASBOURG 5-6 DÉCEMBRE 2019

Maladie de Verneuil : diagnostic, alternatives thérapeutiques, accompagnement des patients

Dr Philippe Guillem

EADV 2020 VIENNE

Communications orales

Systemic or biologic treatment in psoriasis patient does not increase the risk of a severe form of COVID-19

Anne-Claire Fougousse, Marc Perrussel, Pierre-André Bécherel, Edouard BEGON, Valérie Pallure, Ines Zaraq, Guillaume Chaby, Josiane Parier, Mathilde Kemula, Laure Mery Bossard, Claire Poreaux, Charles Taieb, François Maccari, Ziad Reguiai, GEM Resopso

Real-world study of the impact of the COVID-19 pandemic on patients with psoriasis : Free Communications


Halioua B, Astruc A, Zetlaoui J, Wilczynski O, Lévy-Heidmann T, Harrizi M, Radoszycki L, GEM Resopso. Paris. France Département Universitaire de Médecine Générale, UFR de Santé Médecine et Biologie Humaine (SMBH), Université Sorbonne Paris Nord, Bobigny, France, Carenity. France

POSTERS A L'EADV

Impact of psoriatic disease on family planning in women aged 18-45: Results from a multinational survey across 11 countries in Europe

S. McBride, M.C. Fargnoli, A.-C. Fougousse, M. García Bustínduy, L. Catton, 5 L. Senturk, C. Ecoffet, J. Koren, A. Titalii

P239



USE OF SYSTEMIC MEDICATIONS IN ADULT ATOPIC DERMATITIS IN FRANCE, RESULTS OF A PRACTICE SURVEY

ANNE-CLARE FOUKEROUSSE, CAROLINE JACOBSONE, LAURE MERY BOSSARD, ZINO REDUAL, CATHERINE DROPOUCOURT, FRANÇOIS MACCANI, FOR THE GEM RESO ECZEMA

INTRODUCTION

Recent studies have illustrated that systemic medications are underused in adult atopic dermatitis (AD) compared to other chronic inflammatory diseases (psoriasis or chronic spontaneous urticaria) and that dermatologists have concerns regarding the safety profile of ciclosporin in AD.

We performed an on-line practice survey, addressed to all dermatologists members of Reso in France (878 Members). Demographic data (gender, age, type of medical practice), personal use and if so, modalities of prescription of ciclosporin, methotrexate, dupilumab, were collected.

RESULTS

305 dermatologists (34.2% women) answered the survey, 28.5% worked in an hospital, 38.5% had mixed activity (hospital and private practice) and 42.9% had exclusive private practice.

CICLOSPORIN

- Prescribed by 46.9% of the dermatologists for adult AD
- First line systemic treatment: 77.2%, second line 22.8%
- For moderate in 46.3% and severe AD 53.7%
- Average initial dosage: 2.5 mg/kg/d for 16.9%, 3 mg/kg for 42.6%, 5 mg/kg for 38%, other for 4.4%
- Biological monitoring every month in 75.7% of cases, every 2 months in 9.6%, every 3 months in 2.9%, other modalities in 1.6%
- Average duration of treatment: <3 months in 9.6%, 3-6 months in 51.5%, 6-12 months in 35.8%, >1 year in 2.2%
- Before initiation, no evaluation score performed for 54.9% of the dermatologists, IGA 7.9%, SCORAD 23.8%, IAS 13.4%, ISA 17.2% and DLQI 34.8%
- Reasons for non-prescribing ciclosporin were: no eligible patient in 24.7% of cases, lack of information in 52.6%, need of hospital prescription 31.7%, lack of experience 79.2%.

METHOTREXATE

- Prescribed by 54% of the dermatologists for adult AD
- First line systemic treatment: 47.5%, second line 47.5%, after failure of dupilumab 26.6%
- For mild in 1.3%, moderate in 50% and severe AD in 98.7%
- Average initial dosage: 75 mg/week for 48.4%, 20mg/w for 42.4% and 25 mg/w for 4.48%, other dosages in 5.73%.
- In case of lack of efficacy, 70.2% increased the dosage.
- Biological monitoring every month in 25.9% of cases, every 2 months in 19%, every 3 months in 3.6%, other modalities in 23.4%.
- Before initiating methotrexate, no evaluation score performed for 50.5% of the dermatologists, IGA 7.8%, SCORAD 28.2%, IAS 13%, ISA 17% and DLQI 36.9%
- Reasons for non-prescribing methotrexate were: no eligible patient 48.7%, lack of information 39.3%, lack of experience 25.2%, not approved in AD 47.4%.

22% prescribed other systemic treatments in adult AD (sofosfoprine, mycophenolate mofetil), 9.8% prescribed corticosteroids for moderate (71%) or severe (96.4%) AD. 56.4% of the dermatologists prescribed dupilumab in adult AD.

Systemic treatments for AD are used by half of the dermatologists, despite the fact that ciclosporin and dupilumab must be initiated in hospital in France. Methotrexate seems to be preferred to ciclosporin although it's not approved in this indication in France. A vast majority of dermatologists do not perform any evaluation score before initiating systemic treatment for adult AD.

Avec le soutien institutionnel de Pfizer





ANNE-CLAIRE FOUGEROUSSE, FRANÇOIS MACCARI, ZIAD REGUIAI, EDOUARD BEGON, VALÉRIE FALLURE, CHARLES TAIEB, CÉLINE GIRARD, LAURE MERY-BOSSARD,
FOR THE GEM RESOPO

INTRODUCTION

The COVID-19 pandemic in France has led to the implementation of containment measures since 17 March 2020, limiting medical activity to urgent care.

Between 15 and 27 April 2020, we evaluated the impact of these measures on the management of chronic inflammatory dermatoses (CID) by interviewing dermatologists and patients (members of patient's associations) using dedicated questionnaires.

PATIENTS

- n= 2141, 71,8% women
- CID: psoriasis 67.1%, hidradenitis suppurativa 17.3%; atopic dermatitis 15.6%
- 36.2% had a scheduled appointment planned during the containment period :
 - maintained for 8.2%
 - cancelled or postponed themselves for 8.2%
 - cancelled or postponed by the dermatologist for 19.8%
 - 70% reported that no alternative solution had been offered to them
- 1 593 received treatment for CID
 - 76.0% continued
 - 16.7% discontinued due to fear of side effects
 - 5.6% discontinued upon the advice of their dermatologist
 - 1.7% discontinued due to problems of treatment availability in pharmacies
- 40.3% considered that the pandemic had a negative impact on the management of CID.
- 69% reported that their CID worsened during confinement.

DERMATOLOGISTS

- n= 308, 64,7% women
- Hospital-based 25,5%, private practice 50,5% mixed practice 24%
- 95% rescheduled CID follow-up appointments
- 95,1% performed follow-up remotely (teleconsultation, telephone, e-mail)
- 1,62% and 1% stopped systemic and biological treatments in all of their patients during the pandemic period.
- Treatment was maintained as usual in the majority of patients, or its continuation was discussed according to the patient's comorbidities
- Initiation of systemic and biotherapies were postponed in 63.6 and 41.2% of cases
- 49.7% considered that the pandemic had a negative impact on the management of CID
- Prior to the pandemic, only 9.1% already carried out teleconsultations. 68.8% do so during the containment period. 52.3% will conduct more teleconsultations after the pandemic.

The lack of an alternative to face-to-face appointments for the majority of patients may be explained by the fact that teleconsultations were not used before by a vast majority of dermatologists and these procedures took up to several weeks to implement.

Dermatologists did not systematically interrupt systemic or biological treatments of patients with CID in accordance with the recommendations of the scientific associations.

The COVID-19 pandemic has allowed dermatologists to accelerate the implementation of teleconsultations for patients with CID, thus reducing the impact of it on their daily life. It has also highlighted the interest of using digital means (webinars, specialized websites).

DECREASE THYROID HORMONES NEEDS AFTER INTRODUCTION OF OMALIZUMAB IN PATIENTS WITH CHRONIC SPONTANEOUS URTICARIA AND NON AUTO-IMMUNE HYPOTHYROIDISM

P1597



DECREASE THYROID HORMONES NEEDS AFTER INTRODUCTION OF OMALIZUMAB IN PATIENTS WITH CHRONIC SPONTANEOUS URTICARIA AND NON AUTO-IMMUNE HYPOTHYROIDISM

ANNE-CLAIRE FOUGEROUSSE, DERMATOLOGY DEPARTMENT HÔPITAL D'INSTRUCTION DES ARMÉES BÉGIN, FRANCE; RESOURTICAIRE
ANGÈLE SORIA, DERMATO-ALLERGOLOGY DEPARTMENT, HÔPITAL TENON, APHP, PARIS, GROUPE URTICAIRE DE LA SOCIÉTÉ FRANÇAISE DE DERMATOLOGIE

INTRODUCTION

Chronic spontaneous urticaria (CSU) can be associated with thyroid diseases, mostly auto immune in 43-57.4% of cases. We report here two patients with CSU and non-autoimmune thyroid diseases, for which introduction of omalizumab lead to a decrease need of thyroid hormones.

CASE REPORT 1

- 53 years old woman
- history of hypertension and subtotal-thyroidectomy for thyroid nodule, no anti thyroperoxydase (TPO) antibody
- CSU resistant to H1 second-generation antihistamine (up to 3 /d), montelukast and methotrexate
- Treated with levothyroxine 175µg alternating with 150µg every other day, for a long time with stable level of TSH
- Omalizumab (300 mg/4 weeks) enabled a good control of CSU (Urticaria Control Test (UCT): 14/16).
- A few months after its introduction, despite a stable weight and the absence of introduction of any treatment able to interact with levothyroxine, the dosage of TSH was very low, and the posology of levothyroxine decreased to 125µg/d.

CASE REPORT 2

- 49 years old woman
- history of Biermer disease and hypothyroism post subacute thyroiditis (no anti TPO antibody)
- CSU resistant to H1 second-generation antihistamine (up to 4/d) and montelukast.
- Treated with levothyroxine 100µg a day and liothyronin 0.025 mg a day, for a long time with stable level of TSH.
- Omalizumab (300 mg/ 4 weeks 2 months, then 300 mg/2 weeks) enabled a good control of CSU (UCT: 15/16).
- A few months after its introduction, despite a stable weight and the absence of introduction of any treatment able to interact with levothyroxine, the dosage of TSH was very low, and the posology of levothyroxine decreased to 75µg/d.

OMALIZUMAB

- IgE monoclonal antibody licensed for CSU unresponsive to H1 second-generation antihistamine.
- Not known to interact with production, transport, metabolism or activity of iodothyronines.

In the absence of auto-immune thyroid disease for our two patients, we cannot hypothesize an action of omalizumab on anti-thyroid antibodies to explain the decrease need of thyroid hormones. So, we can imagine two hypotheses; the first is that omalizumab interferes with a step of the thyreotropic axis, the second is that control of CSU promotes thyroid hormone production

CONCLUSION

We recommend to closely managing TSH after introduction of omalizumab in patients with any thyroid disease.

P772



USE OF INTERNET BY HIDRADENITIS SUPPURATIVA'S PATIENTS: AN OBSERVATIONAL STUDY, RESOVERNEUIL.NET

ANNE-CLAIRE FOUGEROUSSE, ZIAD REGUIAI, GERMAINE GABISON, NATHALIE BENETON, JULIETTE DELAUNAY, JEAN-LUC PERROT, ANNE-CÉCILE EZANNO, MARIE BASTIEN, VALÉRIE PALLURE, FRANÇOIS MACCARI, PHILIPPE GUILLEM FOR THE GEM RESOVERNEUIL

INTRODUCTION

Internet is widely used by the patients to get medical information. Studies have evaluated the number of requests and the quality of the most frequently consulted websites about hidradenitis suppurativa (HS).

We performed an observational multicentric study in ResoVerneuil network to describe the characteristics of the HS patients who consult internet, and the impact on their medical comportment. A questionnaire was filled by every patient consulting for HS, collecting sociodemographic data, informations on internet use in general and concerning HS, and eventual consequences on their health care use. The physician completed medical data about HS (age of onset, familial history, severity (Hurley staging and HS PGA), treatment) and eventual associated inflammatory disease. We report here the preliminary results.

RESULTS

- 501 patients among which 322 women, mean age 33 years. 203 consulted at hospital and 286 in private office. 22.5 % lived in rural and 74.1% in urban environment (missing data 3.25%). Highest academic degree was GCSE in 3.5%, vocational qualification in 23.25%, bachelor in 24.4%, tertiary study in 34.6%, others in 9%.

- Mean age at beginning of HS was 21.6 years, 9.5% had familial history of HS (father 3.05%, mother 6.3%, brother or sister 6.3%), 3.25% had spondyloarthritis, and 2.2% inflammatory bowel disease. Comorbidities included hypertension in 4.88%, diabetes in 4.67%, depression in 5%, dyslipidemia in 3.9%.

- Hurley stage was I in 35.9%, II in 42.3% and III in 10.4% (missing data for 11.4%). HS PGA was clear in 5.5%, minimal in 16.3%, mild in 34.9%, moderate in 29.9%, severe in 12.6% and very severe in 1%.

- 48.4% of the patients had already had antibiotics for HS, 88.6% surgery and 7.1% biologics.

- 98.2% had access to internet at home and 79.3% used it during the last year to get information about HS. During the last year 4.4% of these patients consult internet once a week, 6.7% at least once a month, 9.2% 6 to 10 times, 26.15% 2 to 5 times and 8.5% once. Reasons were: better understanding of HS 68.9 %, information about treatments in general 52.6%, information about prescribed treatment 17.1 %, looking for a physician 23.4 %, discuss with other patients with HS 15.6 %.

- Patients declared that the information found on internet modify their way to take care of HS in 36.8 %, leading to more consultations in 22.4 %, less consultations in 9.15%. They thought information found on internet was credible in 73.2%.

- They were in majority not able to recall the websites they consulted.

Three quarters of HS patients use internet to gather information about their disease and the treatments. Further analysis will be performed to identify specific profile of patients.

JOURNÉES DERMATOLOGIQUES DE PARIS 2020

Communication orale

Pas de sur-risque de forme grave de COVID19 chez les patients sous traitement systémique ou biologique pour du psoriasis

Anne-Claire Fougousse, Marc Perrussel, Pierre-André Bécherel, Edouard Begon, Valérie Pallure, Ines Zaraq, Guillaume Chaby, Josiane Parier, Mathilde Kemula, Laure Mery-Bossard, Claire Poreaux, Charles Taieb, François Maccari, Ziad Reguiai et Gem Resopso

Sélectionnée pour la nouvelle session Best of des Communications Orales - session 2, comme meilleure communication de la session Maladies Infectieuses 1 par les Présidents de séance.

POSTERS

Impact psychologique de la pandémie de covid-19 chez les patients souffrant de psoriasis pendant le confinement au cours de la « première vague »

Halioua B., Astruc A., Zetlaoui J., Wilczynski O., Lévy-Heidmann T., Harrizi M., Radoszycki L. GEMResopso.Paris. France
Département Universitaire de Médecine Générale, UFR de Santé Médecine et Biologie Humaine (SMBH), Université Sorbonne Paris Nord, Bobigny, France Carenity. France

Déterminants de la réticence des dermatologues vis-à-vis du tatouage chez les patients atteints de psoriasis. Une étude internationale.

C Grodner, A Beauchet, N Kluger, AC Fougrousse, E Cinotti, M Amy de la Bretèque, N Quiles-Tsimaratos, E Mahé, GEM Resopso

JDP | 1-5 DÉCEMBRE 2020

Déterminants de la réticence des dermatologues vis-à-vis du tatouage chez les patients atteints de psoriasis. Une étude internationale.

Camille Grodner¹, Alain Beauchet¹, Nicolas Kluger^{1,4}, Anne-Claire Fougrousse¹, Eliza Cinotti¹, Maud Amy de la Bretèque¹, Nathalie Quiles-Tsimaratos¹, Emmanuel Mahé¹ et GEM Resopso

Introduction. Le tatouage est une pratique de plus en plus répandue dans le monde, avec une prévalence d'environ 10-30% de la population en occident. Le projet «Tatou» a évalué les risques liés au tatouage chez les patients psoriasiques. La première partie, internationale, a montré une forte opposition des dermatologues aux tatouages chez ces patients alors que moins d'un quart avait une expérience personnelle de complications¹. La deuxième partie a montré un taux très faible (6,6%) de complications locales sur tatouage chez ces patients et l'absence de complications sévères.²

Ces résultats nous ont amenés à évaluer les déterminants de cette réticence par rapport au tatouage chez les 468 dermatologues inclus dans la première partie du projet « Tatou ».

Matériel et Méthodes. Nous avons mené une étude internationale transversale en France, Finlande et Italie. Nous avons évalué l'expérience et l'opinion des dermatologues sur le tatouage chez les patients psoriasiques, via un questionnaire anonyme et avons cherché par la suite à évaluer les déterminants de l'opposition au tatouage, afin d'établir des profils des dermatologues « tatou-sceptiques » dans 4 situations : psoriasis actif, psoriasis quiescent, traitement par dermocorticoïdes et biothérapies. Une analyse multivariée de type régression multiple a été effectuée pour identifier les facteurs prédictifs du scepticisme des praticiens. Ont été inclus dans l'analyse multivariée les variables ayant une valeur de $p < 0,20$ en analyse univariée.

Résultats. L'opinion générale des dermatologues par rapport au tatouage était défavorable ($3,5 \pm 2,6/10$; opinion $\leq 5/10$: 78,0%), en particulier, en analyse multivariée, pour les dermatologues plus âgés ($p=0,01$), libéraux ($p=0,04$) et non tatoués ($p<0,0001$). En analyse multivariée le principal paramètre influençant la position du praticien pour le tatouage était son opinion personnelle par rapport au tatouage ($p<0,0001$) quelle que soit l'activité de la maladie ou le type de traitement prescrit. De façon plus inconsistante, les Italiens ou les Finlandais, et les femmes étaient plus réticents au tatouage.

Discussion. Les dermatologues exprimant une opinion négative pour le tatouage chez les patients psoriasiques étaient les dermatologues ayant une opinion spontanément défavorable contre le tatouage. Aujourd'hui les données sur plus de 400 patients sont rassurantes quant à la possibilité de se tatouer avec du psoriasis, y compris sous biothérapie. Cette étude rappelle l'importance pour tout praticien de rester objectif dans sa prise en charge, et de ne pas se laisser influencer par ses opinions personnelles.

Références

- Grodner C, Kluger N, Fougrousse AC, et al. Tattooing and psoriasis: dermatologist' knowledge, attitudes and practices. An international study. *J Eur Acad Dermatol Venerol* 2020;33:18-26.
- Grodner C, Beauchet A, Fougrousse AC, et al. Tattoo complications in treated and non-treated psoriatic patients. *J Eur Acad Dermatol Venerol* 2020;34:1088-96.

Pour en savoir plus : Grodner C, Beauchet A, Kluger N, Fougrousse AC, Cinotti E, Lacrambta F, Amy de la Bretèque M, Quiles-Tsimaratos N, Mahé E, GEM Resopso. Déterminants de la réticence des dermatologues vis-à-vis de tatouage chez les patients atteints de psoriasis. Une étude internationale. *Ann Dermatol Venerol* 2020;Tous droits réservés.

Declaration de liens d'intérêt : aucun.

Regards croisés dermatologues/patients sur l'impact de l'épidémie COVID dans les dermatoses inflammatoires chroniques

Anne-Claire Fougrousse, François Maccari, Ziad Reguiai, Edouard Begon, Valérie Pallure, Charles Taieb, Céline Girard, Laure Mery-Bossard et Gem Resopso

REGARDS CROISÉS DERMATOLOGUES/PATIENTS SUR L'IMPACT DE L'ÉPIDÉMIE DE COVID DANS LES DERMATOSES INFLAMMATOIRES CHRONIQUES

Anne-Claire Fougrousse, François Maccari, Ziad Reguiai, Edouard Begon, Valérie Pallure, Charles Taieb, Céline Girard, Laure Mery-Bossard, Gem Resopso

INTRODUCTION

L'épidémie de COVID19 en France a conduit à la mise en place de mesures de confinement du 17 mars au 12 mai 2020 avec limitation de l'activité médicale aux soins urgents.

Nous avons évalué l'impact de ces mesures sur la prise en charge des dermatoses inflammatoires chroniques (DIC) en interrogeant des dermatologues et des patients (membres d'associations) chacun avec un questionnaire dédié entre le 15 et le 27 avril 2020.

Patients

- n= 2141, 71.8% de femmes
- DIC: psoriasis 67.1%, maladie de Verneuil 17.2%, dermatite atopique 15.6%
- 36.2% avaient un rendez-vous planifié pendant la période de confinement
 - Maintenu pour 8.2%
 - Annulé ou reporté par les patients dans 8.2%
 - Annulé ou reporté par le dermatologue 19.2%, 70% déclaraient qu'aucun soutien de remplacement ne leur avait été proposé
- 1103 étaient traités pour leur DIC
 - 76.9% ont poursuivi leur traitement
 - 16.7% font arrêt par crainte des effets secondaires
 - 5.8% font arrêt sur les conseils de leur dermatologue
 - 1.7% font arrêt par indisponibilité en pharmacie
- 43.7% considéraient que l'épidémie avait un impact négatif sur la prise en charge de leur DIC
- 69% rapportaient une aggravation de leur DIC pendant le confinement

Dermatologues

- n= 308, 64.7% de femmes
- Hospitaliers 25.5%, libéraux 56.5% (moyen 24%)
- 95% ont reporté les rendez-vous pour les DIC
- 95.1% ont assuré le suivi de leurs patients à distance (téléconsultation, téléphone, e-mail)
- 1,62% et 1% ont interrompu systématiquement les traitements systémiques et biologiques pendant l'épidémie
- Les traitements étaient maintenus à l'identique pour la majorité des patients, ou leur poursuite discutée en fonction des comorbidités des patients
- L'initiation des traitements systémiques et biologiques était reportée dans 62.0 et 81.2% des cas
- 49.7% considéraient que l'épidémie avait un impact négatif sur la prise en charge des DIC
- Avant l'épidémie, 9.1% pratiquaient la téléconsultation, pendant l'épidémie 88.8% en ont utilisé, 52.3% déclaraient vouloir pratiquer plus de téléconsultations après l'épidémie.

L'absence de solution de remplacement au rendez-vous présentiel pour la majorité des patients peut s'expliquer par la non-utilisation de la téléconsultation par la majorité des dermatologues avant l'épidémie. Sa mise en place a pu prendre plusieurs jours à semaines expliquant le décalage entre les déclarations des patients et des dermatologues. Ceux-ci n'ont pas systématiquement interrompu les traitements pour les DIC conformément aux recommandations des sociétés savantes début mars 2020. Le taux d'interruption des traitements peut s'expliquer par la méconnaissance de la physiopathologie de l'infection à COVID19, et en particulier celle des formes graves. On note une différence de ressenti de l'impact de l'épidémie sur les DIC, est entre les patients et les dermatologues.

Cette épidémie a permis d'accroître la mise en place de moyens de téléconsultation. Elle a également permis d'obtenir d'autres données (webinaires, sites d'information spécialisés) permettant de transmettre et d'actualiser les informations auprès des patients atteints de DIC avec traitements systémiques ou biologiques.

Efficacité et tolérance à court terme (16 semaines) du guselkumab pour du psoriasis en vraie vie: étude rétrospective multicentrique.

Anne-Claire Fougrousse, Pierre-Dominique Ghislain, Ziad Reguiai, François Maccari, Josiane Parier, Danièle Bouilly-Auvray, Guillaume Chaby, Valérie Pallure, Jean-Luc Schmutz, Cécile Clément, Caroline Jacobzone, Edouard Begon, Eric Esteve et Gem Resopso

EFFICACITÉ ET TOLÉRANCE À COURT TERME (16 SEMAINES) DU GUSELKUMAB POUR DU PSORIASIS EN VRAIE VIE: ÉTUDE RÉTROSPECTIVE MULTICENTRIQUE

Anne-Claire Fougrousse, Pierre-Dominique Ghislain, Ziad Reguiai, François Maccari, Josiane Parier, Danièle Bouilly-Auvray, Guillaume Chaby, Valérie Pallure, Jean-Luc Schmutz, Cécile Clément, Caroline Jacobzone, Edouard Begon, Eric Esteve, Gem Resopso

INTRODUCTION

Le guselkumab (G) a récemment été commercialisé pour la prise en charge du psoriasis modéré à sévère de l'adulte. Les données d'efficacité et de tolérance post-commercialisation sont limitées à ce jour.

Étude rétrospective multicentrique en vie réelle en France et en Belgique. Objectifs: évaluer la tolérance et l'efficacité à 4 mois du G. données caractéristiques des patients à l'inclusion et à 4 mois.

RÉSULTATS

150 patients étaient analysables, leurs caractéristiques sont présentées dans le tableau 1. Le G était la 1ère ligne de thérapie pour 52 patients. Pour les autres, la dernière thérapie reçue était un anti TNF (n=19), de l'ustekinumab (U) (n=63), un anti IL17 (n=39), du ixekizumab (I) (n=1). Les données d'efficacité à 164 sont présentées dans le tableau 2. 63 patients recevaient le G en relais de U, interrompu dans tous les cas pour effets secondaires. Leur PASI moyen initial était de 5.3. 41.3% obtenaient un PASI 50 à M4.

15 patients rapportaient des effets secondaires (arthralgies n=4, asthène n=3, rhumatisme psoriasique n=3, infection dentaire n=3, réaction au site d'injection n=2, lésions lymphoïdes chroniques (LLC) n=1, eczéma et palpitations n=1, attaque de panique n=1). 5 patients arrêtaient le G avant M4 (arthralgies n=1, réaction au site d'injection n=1, LLC, attaque de panique, palpitations et eczéma).

Caractéristique	PROF 100	PROF 50	PROF 75
Population globale (n=150)	66 (44.0%)	61 (40.7%)	23 (15.3%)
PASI 50 à l'inclusion (n=150)	37 (56.1%)	31 (50.8%)	15 (65.2%)
PASI 75 à l'inclusion (n=150)	27 (40.9%)	26 (42.6%)	17 (73.9%)
Patients naïfs de thérapies (n=150)	23 (34.7%)	21 (32.8%)	11 (47.8%)
Patients LT* ligne de thérapie	46 (69.7%)	51 (81.9%)	16 (69.6%)

Tableau 1. Efficacité à l'inclusion

L'efficacité dans notre série est comparable à celle des études de phase 3 pour le PASI 100 (37.4% et 34.1% dans VOYAGE (V) 1 et 2). Elle est cependant inférieure pour le PASI 50 (73.3% et 70% dans V 1 et 2). Ceci peut s'expliquer par les caractéristiques de nos patients, différentes de celles des patients de V1 et 2: sévérité inférieure, proportion de patients non naïfs de thérapies supérieure.

47% des patients recevant du G en relais de U atteignaient un PASI 50 à 4 mois. Ce résultat est comparable à celui de l'étude AUGUSTE où 50.4 % des patients non répondants après 2 injections de U, obtenaient un PASI 50 après 4 mois de G, soulignant l'intérêt d'un switch entre anti IL23/1 et anti IL17/23.

Caractéristique	PROF 100	PROF 50	PROF 75
Population globale (n=150)	66 (44.0%)	61 (40.7%)	23 (15.3%)
PASI 100 à M4 (n=150)	25 (37.9%)	21 (34.4%)	11 (47.8%)
PASI 50 à M4 (n=150)	73 (110.5%)	68 (111.6%)	31 (134.8%)
PASI 75 à M4 (n=150)	37 (56.1%)	31 (50.8%)	15 (65.2%)
Patients naïfs de thérapies (n=150)	23 (34.7%)	21 (32.8%)	11 (47.8%)
Patients LT* ligne de thérapie	46 (69.7%)	51 (81.9%)	16 (69.6%)

Tableau 2. Efficacité à M4

Aucun effet secondaire grave n'était constaté durant l'étude et le profil des effets secondaires était comparable à celui des études de phase 3. Le taux d'interruption pour effet secondaire 2.7% était légèrement supérieur à celui de V1 et 2: 1.2% et 1.4%.



« L'ARTICLE À NE PAS MANQUER »



Taux de maintien thérapeutique faible chez les patients traités par apremilast

Dr Guillaume Chaby
Service de Dermatologie, CHU Amiens

«La littérature est pauvre en informations concernant l'efficacité à long terme de l'apremilast si l'on excepte les données provenant de l'extension des études randomisées qui concernent cependant des patients très sélectionnés.

Le but de l'étude présentée ici était de comparer le taux de maintien à long terme observé en pratique courante du traitement par apremilast comparé à celui du méthotrexate. Il s'agit d'une étude de pharmaco-épidémiologie réalisée à partir de la base de données du Système National des Données de Santé (SNDS) entre 2009 et 2017.

Les auteurs ont identifié tous les patients adultes atteints de psoriasis ayant reçu au moins une prescription d'apremilast ou de méthotrexate entre septembre 2016 (date de l'autorisation de mise sur le marché de l'apremilast en France) et décembre 2017. Les patients sélectionnés n'avaient jamais reçu auparavant l'un ou l'autre de ces deux traitements. Un score de propension a été calculé à partir de plusieurs facteurs potentiellement confondants (en particulier âge, sexe, nombre de traitements systémiques pour le psoriasis, comorbidités cardiovasculaires, antécédent de cancer) dans le but de former deux groupes les plus comparables possibles.

Au total, 14 147 patients ont été identifiés durant la période d'étude, 5505 traités par apremilast et 8642 par méthotrexate. Par rapport aux patients sous méthotrexate, les patients traités par apremilast présentaient d'avantage de comorbidités cardiovasculaires ou d'antécédent de cancer, un nombre reçu de traitements systémiques antérieurs plus important, alors que la sévérité du psoriasis, évaluée à partir de la consommation récente de corticoïdes topiques, était semblable dans les 2 groupes.

Après appariement selon le score de propension, 2 sous-groupes de 4805 patients ont été formés. Durant la première année de traitement, 69 % des patients du groupe apremilast et 59 % du groupe méthotrexate ont arrêté leur traitement (HR 1.34, 95 % IC: 1.27-1.41 ; $p < 0.001$). Ce sur-risque d'arrêt thérapeutique était indépendant du nombre de traitements systémiques reçus antérieurement.

Dans environ 20 % des cas, les patients ont stoppé l'apremilast ou le méthotrexate pour un switch vers un autre traitement systémique. Dans 80 % des cas, le motif d'arrêt était inconnu, les auteurs suggérant qu'un ratio efficacité/tolérance faible pouvait en être la cause.

En conclusion, les auteurs s'interrogent sur la pertinence de la prescription de l'apremilast du fait, d'une part, d'un taux de maintien à long terme significativement plus faible que celui du méthotrexate, et d'autre part, du fait des données supérieures d'efficacité des biothérapies, sauf en cas de contre-indication à ces traitements systémiques.»

Sbidian E, Billionnet C, Weill A, Maura G, Mezzarobba M. Persistence of apremilast in moderate-to-severe psoriasis: a real-world analysis of 14 147 apremilast- and methotrexate-naïve patients in the French National Health Insurance database. Br J Dermatol 2020; 182: 690-97.

THESE 2020

Thèse soutenue par Raphaella Cohen-Sors le 29 septembre 2020 à la faculté de médecine d'Amiens

Traitement du psoriasis par biothérapies et Apremilast en cas d'antécédent d'hémopathie maligne en rémission ou évolutive : une série de cas.

RÉSUMÉ

Introduction :

Le Résumé des Caractéristiques du Produit (RCP) des biothérapies (BT) (anti-TNF α , anti-IL-17, anti-IL-12/23, anti-IL-23) et de l'apremilast (APR) ne contient aucune contre-indication concernant les patients atteints de psoriasis aux antécédents d'affections hématologiques malignes. Cependant, les différentes recommandations incitent à la prudence en l'absence de données suffisantes dans la littérature. Il n'existe aucun retour d'expérience sur le risque de récurrence ou d'évolution des hémopathies malignes quelles qu'elles soient, chez les patients traités par BT ou APR pour un psoriasis.



Méthode :

Nous avons réalisé une étude nationale observationnelle rétrospective multicentrique via le Groupe d'Étude RESOPSO afin de décrire la tolérance et l'efficacité des BT et de l'APR à partir d'une série de patients atteints de psoriasis et avec un antécédent d'hémopathie maligne en rémission ou évolutive.

Résultats :

Nous avons inclus 21 patients aux antécédents d'hémopathies malignes (5 leucémies lymphoïdes chroniques, 5 lymphomes non hodgkinien, 4 lymphomes de Hodgkin, 2 thrombocytémie essentielle, 3 polyglobulies de Vaquez, un myélome multiple et une maladie de Waldenström), d'âge moyen 63 ans, traités pour un psoriasis par BT ou APR depuis plus de 2 ans en moyenne pour la majorité d'entre eux, avec une durée médiane de traitement de 16 mois sous BT et de 6 mois sous APR. Les patients présentaient soit des hémopathies malignes évolutives (12/21), soit en rémission depuis moins de 5 ans (6/21) ou depuis plus de 5 ans (3/21). Nous avons observé pour la majorité des patients l'absence de récurrence, ou de progression de l'hémopathie maligne au cours des traitements par BT/APR.

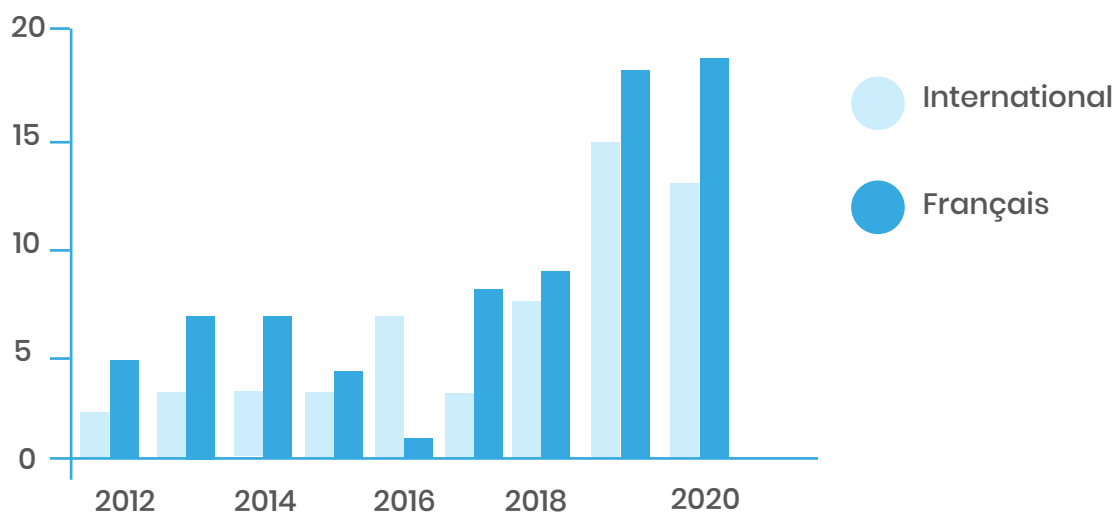
Seulement 3 patients ont présenté une progression de leur hémopathie, dont 2 sous BT et un sous APR, sans retentissement sur la poursuite de ces traitements.

Conclusion :

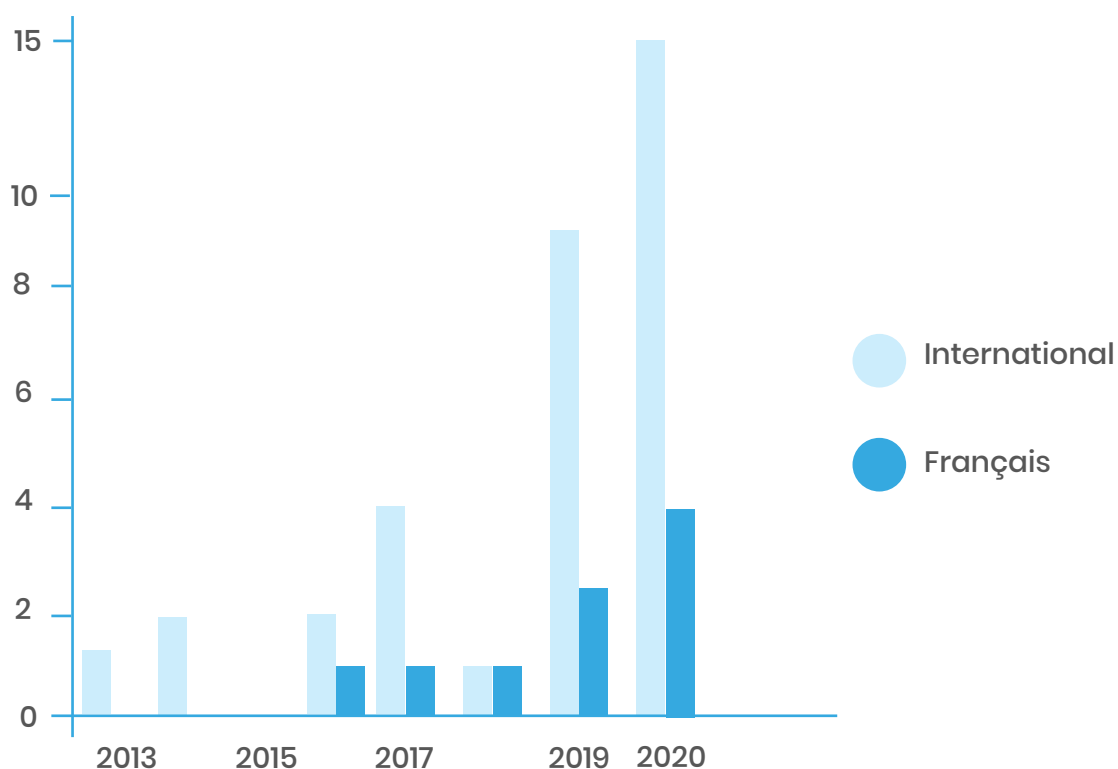
Les résultats de notre série de cas montrent une bonne tolérance et efficacité des traitements par BT ou APR utilisés pour un psoriasis en cas d'antécédents d'hémopathies malignes. Malgré ces données rassurantes, il semble nécessaire de poursuivre les investigations sur de plus grandes cohortes.

SYNTHÈSE DES COMMUNICATIONS ET ARTICLES AU SEIN DE RESO

PRÉSENTATIONS À DES CONGRÈS

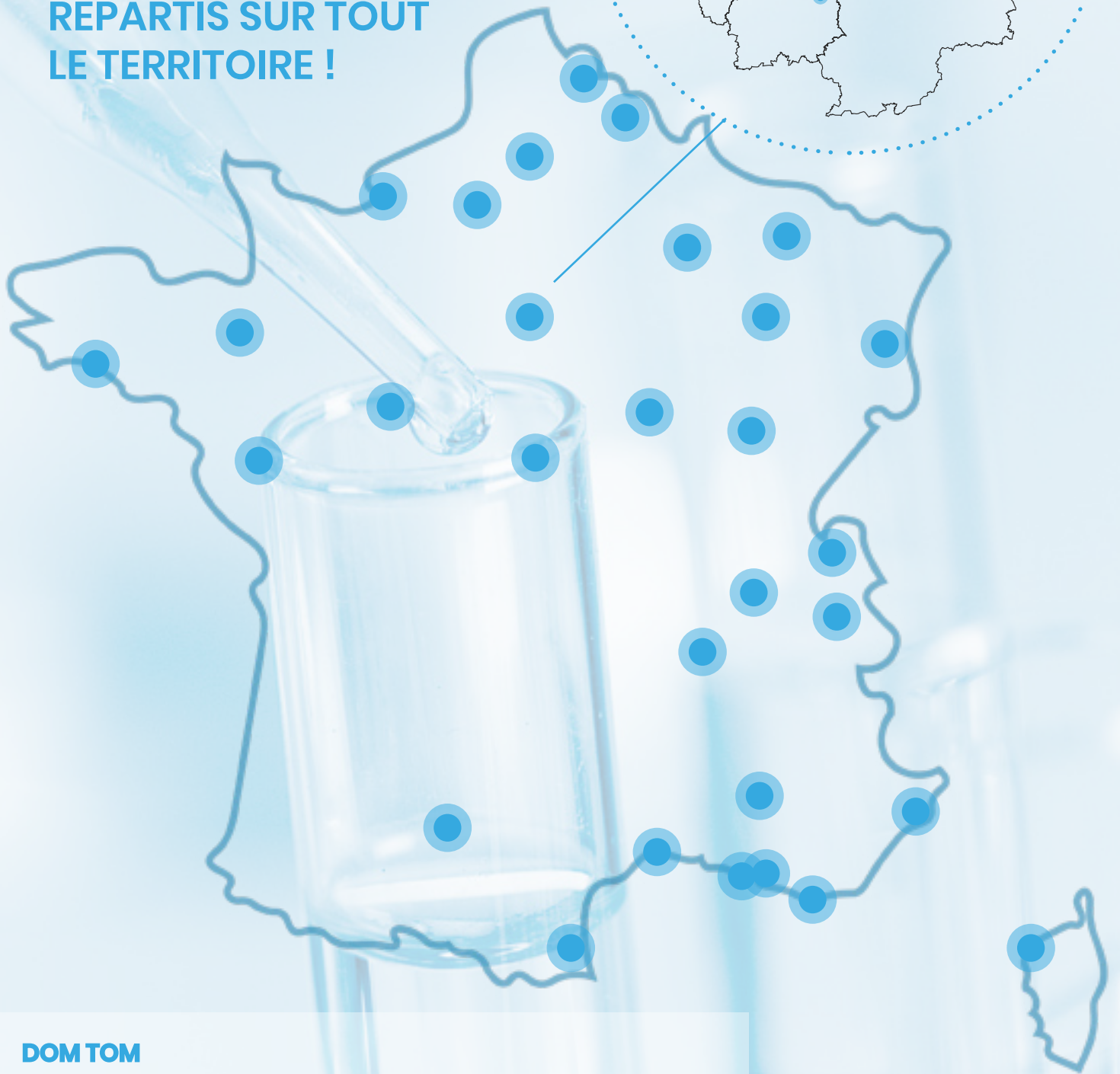


PUBLICATIONS



**49 CENTRES EXPERTS
RÉPARTIS SUR TOUT
LE TERRITOIRE !**

ILE-DE-FRANCE



DOM TOM

