

## INTRODUCTION

Although hidradenitis suppurativa (HS) is not primarily an infectious disease, antibiotics (AB) are widely used to treat this pathology with limited evidence. The choice of the AB is based on small randomized controlled trials and on open case-series. French guidelines for HS management have been published in 2019. We sought to describe the practice regarding AB prescriptions for HS in France.

## MATERIAL AND METHODS

Practice survey in the French physicians network “ResoVerneuil” (278 members including dermatologists, surgeons, gastroenterologists) to identify the antibiotic strategy used in daily life for the treatment of HS according to the Hurley stage. Online questionnaire was sent to all members between 4<sup>th</sup> of January and 14<sup>th</sup> of February 2021. For each Hurley stage, the physician was asked whether he uses AB to treat HS’s flares and/or as background therapy and when appropriate which AB (several answers possible for each Hurley stage) and the length of the prescription.

## RESULTS

108 physicians answered the survey, with 101 analyzable answers. 37.6% were hospital based, 34.6% had a private practice and 27.8% a mixed practice, 13.8% had a dedicated consultation for HS. 63 physicians reported to see < 5 patients with HS per month, 29 5 to 15 patients and 9 > 15 patients. AB prescription according to Hurley stage is presented for flares and for background therapy in tables.

| Antibiotics for flares    | HS Hurley 1, <4 flares/year       | HS Hurley 1, >4 flares/year       | HS Hurley 2                                 | HS Hurley 3                                 |
|---------------------------|-----------------------------------|-----------------------------------|---|---|
| - Yes                     | 90%                               | 92.9%                             | 90%   | 83.3%                                       |
| - Type of antibiotic used | Amoxicillin-clavulanic acid 85,7% | Amoxicillin-clavulanic acid 85,9% | Amoxicillin-clavulanic acid 79,3%           | Amoxicillin-clavulanic acid 72%             |
|                           | Pristinamycin 49,5%               | Pristinamycin 44,6%               | Pristinamycin 41,5%                         | Pristinamycin 41,3%                         |
|                           | Doxycyclin 2,2%                   | Doxycyclin 5,4%                   | Ceftriaxone-metronidazole 3,7%              | Ceftriaxone-metronidazole 6,7%              |
|                           | Rifampicin-clindamycin 2,2%       | Rifampicin-clindamycin 2,2%       | Rifampicin-clindamycin 2,4%                 | Rifampicin-clindamycin 4%                   |
|                           | Clindamycin 1,1%                  | Clindamycin 1,1%                  | Doxycyclin 1,2%                             | Clindamycin-ofloxacin 2,7%                  |
|                           | Pristinamycin-metronidazole 1,1%  | Pristinamycin-metronidazole 1,1%  | Ceftriaxone 1,2%                            | Clindamycin – moxifloxacin 1,3%             |
|                           | Azithromycin 1,1%                 | Azithromycin 1,1%                 | Clindamycin-ofloxacin 1,2%                  | Ertapenem 2,7%                              |
|                           |                                   | Metronidazole 1,1%                | Clindamycin – moxifloxacin 1,2%             | Clindamycin – moxifloxacin 1,3%             |
|                           |                                   |                                   | Ciprofloxacin 1,3%                          | Ciprofloxacin 1,3%                          |
|                           |                                   |                                   | Metronidazole 1,3%                          | Metronidazole 1,3%                          |
|                           |                                   |                                   | Clindamycin-moxifloxacin-metronidazole 1,3% | Clindamycin-moxifloxacin-metronidazole 1,3% |
|                           |                                   |                                   | Tazocillin 1,3%                             | Tazocillin 1,3%                             |
|                           |                                   |                                   | Ceftriaxone 1,3%                            | Ceftriaxone 1,3%                            |

| Background antibiotic therapy     | HS Hurley 1, <4 flares/year        | HS Hurley 1, >4 flares/year                 | HS Hurley 2                                 | HS Hurley 3                                  |
|-----------------------------------|------------------------------------|---|---|--|
| - Yes                             | 29.7%                              | 75.6%                                       | 86.8%                                       | 80%  |
| - Type of antibiotic used         | Cyclins 100%                       | Cyclins 100%                                | Cyclins 83,5%                               | Cyclins 68%                                  |
|                                   | Sulfamethoxazole-trimethoprim 6,7% | Sulfamethoxazole-trimethoprim 20%           | Rifampicin-clindamycin 27,8%                | Rifampicin-clindamycin 31,4%                 |
|                                   | Rifampicin-clindamycin 6,7%        | Rifampicin-clindamycin 9,3%                 | Sulfamethoxazole-trimethoprim 26,6%         | Sulfamethoxazole-trimethoprim 31,9%          |
|                                   | Topical clindamycin 3,3%           | Topical clindamycin 5,3%                    | Clindamycin-ofloxacin 10,1%                 | Ceftriaxone-metronidazole 18%                |
|                                   |                                    | Clindamycin-ofloxacin 2,7%                  | Clindamycin-ofloxacin 10,1%                 | Clindamycin-ofloxacin 13,8%                  |
|                                   |                                    | Pristinamycin-metronidazole 2,7%            | Topical clindamycin 8,8%                    | Clindamycin-ofloxacin 13,8%                  |
|                                   |                                    | Ceftriaxone-metronidazole 2,7%              | Clindamycin-levofloxacin 6,3%               | Rifampicin- moxifloxacin-metronidazole 13,9% |
|                                   |                                    | Clindamycin-levofloxacin 1,3%               | Rifampicin- moxifloxacin-metronidazole 6,3% | Clindamycin-levofloxacin 12,5%               |
|                                   |                                    | Rifampicin- moxifloxacin-metronidazole 1,3% | Azithromycin 6,3%                           | Topical clindamycin 5,5%                     |
|                                   |                                    | Azithromycin 1,3%                           | Pristinamycin-metronidazole 3,8%            | Azithromycin 4,2%                            |
|                                   |                                    |   | Ceftriaxone-metronidazole 2,5%              | Pristinamycin-metronidazole 2,8%             |
|                                   |                                    |   |   | Ertapenem 4,2%                               |
| - Length of prescription (months) | < 3 : 0%                           | < 3 : 5,3%                                  | < 3 : 7,6%                                  | < 3 : 13,9%                                  |
|                                   | 3 -6 : 76,7%                       | 3 -6 : 73,3%                                | 3 -6 : 69,6%                                | 3 -6 : 56,9%                                 |
|                                   | >6 : 23,3%                         | >6 : 21,4%                                  | >6 : 22,8%                                  | >6 : 29,2%                                   |

## CONCLUSION

A vast majority of physicians prescribe AB for flares whatever the Hurley stage is, mostly amoxicillin-clavulanic acid and pristinamycin, in accordance to the French recommendations. Background AB therapy is prescribed by about 80% of physicians for patients with HS Hurley 2 and 3 and for those with Hurley 1 with ≥ 4 flares/year. 30% of physicians although prescribe background AB therapy for patients with Hurley 1 HS with < 4 flares year, which is not proposed in French recommendations. Background AB used are mostly cyclins, sulfamethoxazole-trimethoprim and combination of ceftriaxone and metronidazole (for Hurley 3 stages). Several other AB are used as combination of rifampicin and clindamycin (as proposed in European recommendations for the treatment of HS), combination of clindamycin and quinolones, azithromycin .... Combination of clindamycin and levofloxacin proposed in French recommendations as attack treatment in Hurley 3 stages is very little used in practice. Length of combination of AB exceed 3 months in 80% of cases, contrary to recommendations. Physicians seeing more than 15 patients with HS per month were more likely to respect French recommendations. There was no difference in AB pattern prescription according to the existence of a dedicated consultation for HS. Limits are the absence of question about the impact of the French recommendations on the habits of AB prescriptions, the impossibility to determinate exactly the length of each type of background AB.

This survey underlines the heterogeneity in AB prescription for HS in France particularly as background therapy, and the high rate of long prescription of combination of AB. Studies with better level of evidence are needed in order to improve the use of AB in HS and to clarify their place in the management of HS (monotherapy, combination with biologics and surgery...).