

Antibiotic Treatment for Hidradenitis Suppurativa in France: A Practice Survey

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On behalf of the GEM ResoVerneuil

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Purpose: Antibiotics are used for hidradenitis suppurativa's management with limited evidence. Choice of antibiotics is based on small randomized controlled trial or open case-series.

Patients and Methods: We performed a practice survey in Resoverneuil, a French network of physicians treating hidradenitis suppurativa, to identify the antibiotic strategy according to the Hurley stage. Online questionnaire was sent to all members of ResoVerneuil between January and February 2021.

Results: In total, 108 physicians answered the survey: 37.6% were hospital based, 34.6% had a private practice and 27.8% a mixed practice, and 13.8% had a dedicated consultation for hidradenitis suppurativa. Sixty-three physicians reported seeing fewer than 5 patients with hidradenitis suppurativa per month; 29 seeing 5 to 15 patients per month; and 9 seeing more than 15 patients per month. More than 90% declared prescribing antibiotics for flares in Hurley 1 and 2 stages, and 83% in Hurley 3 stages, mostly amoxicillin-clavulanic acid and pristinamycin. Of these physicians, 29.7% declared prescribing a background antibiotic therapy for Hurley 1 stage with less than 4 flares per year, and more than 75% for Hurley 1 stage with more than 4 flares per year, Hurley 2 and Hurley 3 stages; mostly cyclins, combination of rifampicin and clindamycin and sulfamethoxazole-trimethoprim.

Conclusion: This survey underlines the heterogeneity in antibiotic prescription for hidradenitis suppurativa in France, particularly as background therapy.

Keywords: hidradenitis suppurativa, antibiotics, practice survey

Introduction

Although hidradenitis suppurativa is not primarily an infectious disease, antibiotics are widely used to treat this pathology based on limited evidence. The choice of type and length of antibiotics regimen is based on small randomized controlled trials for topical clindamycin¹ and tetracyclin² and on open case-series for other antibiotics as combinations of rifampicin-clindamycin,^{3–9} clindamycin as monotherapy,¹⁰ ofloxacin-clindamycin¹¹ or rifampicin-moxifloxacin-metronidazole,¹² dapsone.¹³ French guidelines for the management of hidradenitis suppurativa were published in 2019, comprising recommendations concerning antibiotherapy use.¹⁴ For Hurley stage I or II hidradenitis suppurativa, use of amoxicillin/clavulanic acid or pristinamycin for 7 days was recommended; for preventive treatment or post acute care, cotrimoxazole or cyclins. For Hurley stage II or III hidradenitis suppurativa, use of ceftriaxone/metronidazole or levofloxacin/clindamycin for 15–21 days was recommended, then cotrimoxazole or cyclins. We sought to describe the practice regarding antibiotic prescriptions for hidradenitis suppurativa in France, 18 months after the first communication of the French guidelines.

Patients and Methods

We performed a practice survey in the French physicians network “ResoVerneuil” to identify the antibiotic strategy used in daily life by these physicians for the treatment of hidradenitis suppurativa according to the Hurley stage. ResoVerneuil comprises 278

members (dermatologists, surgeons, gastroenterologists [excluding students in medicine]), objectives of which are to improve the knowledge of healthcare professionals and patients about hidradenitis suppurativa, to improve the patient's journey and to promote research about hidradenitis suppurativa. A questionnaire was sent by e-mail (with two reminders) to all members of ResoVerneuil between 4th of January and 14th of February 2021 (see [Figure 1](#)).

The questionnaire collected the gender of the dermatologist, the mode of practice (hospital, private or mixed) and the prescription of antibiotics for hidradenitis suppurativa. For each Hurley stage, the physician was asked

Are you ? *a man a woman*

How old are you ? *years*

What is your mode of practice ? *Hospital based /Private /Both*

Have you a consultation dedicated to hidradenitis suppurativa ? *yes/no*

How many patients with hidradenitis suppurativa are you seeing each month ? *<5/ 5 to 15/ >15*

Concerning Hurley 1 hidradenitis suppurativa with less than 4 flares per year, Hurley 1 hidradenitis suppurativa with more than 4 flares per year, Hurley 2 and 3 hidradenitis suppurativa, please answer the following questions:

- Do you prescribe antibiotics for flares ? *yes/no*
- If yes, which antibiotic are you using ? (multiple answers possible)
 - o amoxicillin-clavulanic acid
 - o pristinamycin
 - o other
- Do you prescribe background antibiotics? *yes/no*
- If yes, which antibiotic are you using ? (multiple answers possible)
 - o Topical clindamycin
 - o Doxycyclin
 - o Minocyclin
 - o Limecyclin
 - o Cotrimoxazole
 - o Rifampicin-clindamycin
 - o Ofloxacin – clindamycin
 - o Levofloxacin- clindamycin
 - o Pristinamycin –metronidazole
 - o Ceftriaxone- metronidazole
 - o Rifampicin – moxifloxacin – metronidazole
 - o Ertapenem
 - o Azithromycin
 - o Other, please precise
- If yes, for how long ? *< 3 months/ 3 to 6 months/ > 6 months*

Figure 1 Questionnaire.

whether they use antibiotics to treat hidradenitis suppurativa's flares and/or as background therapy and, when appropriate, which antibiotic (multiple answers were possible for each Hurley stage) and, for the background therapy, the length of the prescription. For this type of study, French regulations do not require submission to an ethics committee, as this study does not enter the field of the deliberation n°2018-154 of the 3rd of May 2018 (JORF n°0160 of the 13th of July 2018).

Results

One-hundred-eight physicians answered the survey, with 101 analyzable answers. Among those, 75.9% were women, 37.6% were hospital based, 34.6% had a private practice and 27.8% a mixed practice (hospital and private), and 13.8% had a dedicated consultation for hidradenitis suppurativa. Sixty-three physicians reported seeing fewer than 5 patients with hidradenitis suppurativa per month, 29 seeing 5 to 15 patients per month and 9 seeing more than 15 patients per month.

Antibiotics prescription according to Hurley stage is presented in Table 1 for flares and in Table 2 for background therapy.

Discussion

A vast majority of physicians prescribe antibiotics for flares whatever the Hurley stage is, mostly amoxicillin-clavulanic acid and pristinamycin, in accordance with the French recommendations.¹⁴ Background antibiotic therapy is prescribed by about 80% of physicians for patients with hidradenitis suppurativa Hurley 2 and 3 and for those with Hurley 1 with more than 4 flares per year. Thirty percent of physicians, however, prescribe background antibiotic therapy for patients with Hurley 1 hidradenitis suppurativa with less than 4 flares per year, which is not proposed in French recommendations. We can hypothesize that this situation concerns Hurley 1 patients experiencing few but severe flares, as abscesses requiring surgical management. Background antibiotics used are mostly cyclins, cotrimoxazole and combination of ceftriaxone and metronidazole (for Hurley 3 stage). Several other antibiotics are used as combinations of rifampicin and clindamycin (as proposed in European recommendations for the treatment of hidradenitis suppurativa)¹⁵ and clindamycin and quinolones, azithromycin, etc. The combination of clindamycin and levofloxacin proposed in French recommendations as attack treatment in Hurley 2 and 3 stages is very little used in practice. Length of combination of antibiotics exceeds 3 months in

Table 1 Antibiotics for Flares

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 Pristinamycin 49.5 Doxycyclin 2.2 Rifampicin-clindamycin 2.2 Clindamycin 1.1 Pristinamycin-metronidazole 1.1 Azithromycin 1.1	Amoxicillin-clavulanic acid 85.9 Pristinamycin 44.6 Doxycyclin 5.4 Rifampicin-clindamycin 2.2 Clindamycin 1.1 Pristinamycin-metronidazole 1.1 Azithromycin 1.1 Metronidazole 1.1	Amoxicillin-clavulanic acid 79.3 Pristinamycin 41.5 Ceftriaxone-metronidazole 3.7 Rifampicin-clindamycin 2.4 Doxycyclin 1.2 Ceftriaxone 1.2 Clindamycin-ofloxacin 1.2 Clindamycin – moxifloxacin 1.0.2	Amoxicillin-clavulanic acid 72 Pristinamycin 41.3 Ceftriaxone-metronidazole 6.7 Rifampicin-clindamycin 4 Clindamycin-ofloxacin 2.7 Ertapenem 2.7 Clindamycin –moxifloxacin 1.3 Ciprofloxacin 1.3 Metronidazole 1.3 Clindamycin-moxifloxacin-metronidazole 1.3 Tazocilline 1.3 Ceftriaxone 1.3

Abbreviation: HS, hidradenitis suppurativa.

Table 2 Background Antibiotic Therapy

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 Cotrimoxazole 6.7 Rifampicin-clindamycin 6.7 Topical clindamycin 3.3	Cyclins 100 Cotrimoxazole 20 Rifampicin-clindamycin 9.3 Topical clindamycin 5.3 Clindamycin-ofloxacin 2.7 Pristinamycin-metronidazole 2.7 Ceftriaxone-metronidazole 2.7 Clindamycin-levofloxacin 1.3 Rifampicin-moxifloxacin-metronidazole 1.3 Azithromycin 1.3	Cyclins 83.5 Rifampicin-clindamycin 27.8 Cotrimoxazole 26.6 Clindamycin-ofloxacin 10.1 Topical clindamycin 8.8 Clindamycin-levofloxacin 6.3 Rifampicin-moxifloxacin-metronidazole 6.3 Azithromycin 6.3 Pristinamycin-metronidazole 3.8 Ceftriaxone-metronidazole 2.5	Cyclins 68 Rifampicin-clindamycin 31.4 Cotrimoxazole 31.9 Ceftriaxone-metronidazole 18 Clindamycin-ofloxacin 13.8 Rifampicin-moxifloxacin-metronidazole 13.8 Clindamycin-levofloxacin 12.5 Topical clindamycin 5.5 Azithromycin 4.2 Ertapenem 4.2 Pristinamycin-metronidazole 2.8
Length of prescription (%)	< 3 months 0 3–6 months 76.7 >6 months 23.3	< 3 months 5.3 3–6 months 73.3 >6 months 21.4	< 3 months 7.6 3–6 months 69.6 >6 months 22.8	< 3 months 13.9 3–6 months 56.9 >6 months 29.2

Abbreviation: HS, hidradenitis suppurativa.

80% of cases, contrary to the recommendations. This can be explained by the absence of therapeutic alternatives, as adalimumab was not reimbursed for hidradenitis suppurativa at this time in France.

Physicians seeing more than 15 patients with hidradenitis suppurativa per month were more likely to respect French recommendations, probably being more up to date about hidradenitis suppurativa's management. There was no difference in antibiotic pattern prescription according to the existence of a dedicated consultation for hidradenitis suppurativa.

Limits of this study are the absence of a question about the impact of the French recommendations on the habits of antibiotic prescription, and the impossibility to determinate exactly the length of each type of background antibiotic when the physicians declared prescribing more than one type.

Conclusion

This survey underlines the heterogeneity in antibiotic prescription for hidradenitis suppurativa in France, particularly as background therapy, and the high rate of long prescription of antibiotic combinations. As long-term use of antibiotic combinations, in particular fluoroquinolones and rifampicin, can lead to serious adverse events and development of antibioresistance, their use should be limited. Cyclins or cotrimoxazole appear to be a safer long-term option. Since this survey was taken, adalimumab is now reimbursed for hidradenitis suppurativa, which may lead to a modification of antibiotic use. However, studies with a better level of evidence are needed in order to improve the use of antibiotics in hidradenitis suppurativa and to clarify their place in the management of hidradenitis suppurativa (monotherapy, combination with biologics or surgery, etc.).

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Disclosure

Dr Philippe Guillem reports receiving personal fees from Abbvie, Novartis, UCB Pharma and Concatec, outside the submitted work. Dr Ziad Reguiai reports being an investigator in clinical trials and a consulting (board) speaker for Abbvie, Amgen, Leo Pharma, Pfizer, Janssen, Almirall, UCB and Novartis; and a speaker for Medac, an investigator in clinical trial consulting (board) for Celltrion and a consulting (board) speaker for Lilly, outside the submitted work. The authors have no other conflicts of interest to declare.

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