Facklamia hominis in hidradenitis suppurativa

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Key words: case report; *Facklamia hominis*; hidradenitis suppurativa; infectious disease.

INTRODUCTION

Hidradenitis suppurativa (HS) is a chronic, inflammatory skin condition presenting with recurrent, painful abscesses with malodorous drainage secondary to follicular occlusion of pilosebaceous units.[1] Factors contributing to the development of HS include genetic predisposition, smoking, hyperandrogenemia, and bacterial infection. The most common pathogens involved are *Staphylococcus lugdunensis* and anaerobic actinomycetes[1]; however, here we present a rare case of HS containing *Facklamia hominis*. First discovered in 1997, *F. hominis* is an anaerobic bacterium infrequently found in clinical settings. *Facklamia hominis* is most often found in women, suggesting it may be part of the normal vaginal flora; however, this species has been found in many other sites, including the gastrointestinal intestinal tract, bone, and cerebrospinal fluid.[2]

Abbreviations used:

HS:	hidradenitis suppurativa
IV:	intravenous
MALDI-TOF:	matrix-assisted laser desorption ionization−time-of-flight mass spectrometry
PO:	peroral
TMP-SMX:	trimethoprim-sulfamethoxazole

CASE REPORT

A 64-year-old female presented to the emergency department with a left-axillary abscess at the apex of the axilla. Her past medical history was significant for poorly controlled type 2 diabetes mellitus, coronary artery disease, Hurley stage III HS (the patient did not receive immunosuppressants due to poor compliance and follow-up), and daily tobacco use. The abscess had been present for about 2 weeks and worsened over the past few days. The patient denied fevers or chills. Patient vitals during the emergency department visit were within the normal ranges. General surgery was consulted, and performed bedside incision and drainage, obtained gram stain and culture from the axillary abscess, and recommended discharge with a 7-day course of peroral (PO) trimethoprim-sulfamethoxazole (TMP-SMX) and outpatient follow-up. However, the patient returned to the emergency department 5 days later with increased pain; malodorous, brown-colored discharge, and spread of the abscess within the axilla. The patient's vitals and basic lab work were unremarkable; however, her glucose level was elevated at 386 mg/dL. Blood cultures were also obtained, and bedside incision and drainage was performed. The previous wound culture demonstrated the presence of *Facklamia hominis*. Susceptibility was not performed because breakpoints were not set due to the infrequent observation of this bacterium in clinical settings. Therefore, due to the failed trial of TMP-SMX, the patient was started on broad-spectrum intravenous (IV) vancomycin and piperacillin/tazobactam and admitted for further evaluation by an infectious disease specialist. After evaluation, antibiotic therapy was modified to IV vancomycin and oral moxifloxacin. Over her 3-day admission, the patient remained stable with improvements in terms of tenderness, erythema, induration, and drainage of the wound, and blood cultures were negative. The patient was discharged on moxifloxacin 400 mg daily and amoxicillin 1 g every 8 hours for 7 days with outpatient infectious disease follow-up. Although the patient showed

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Funding sources: None.

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JAAD Case Reports 2021;11:20-2.
2352-5126

https://doi.org/10.1016/j.jdcr.2021.03.017

Table I. Previous cases of *Facklamia hominis* with information on method of identification and treatment

Year	Sex	Age	Source	Diagnosis	Identification	Treatment	Reference
2005	F	34 yrs	Blood	Chorioamnionitis	unknown	Penicillin and ampicillin	3
2010	unknown	unknown	Blood	Endocarditis	VITEK 2 system	Gentamicin and Vancomycin*	4
2012	M	35 yrs	Blood	Endocarditis	unknown	IV Ceftriaxone	5
2014	F	81 yrs	Periprosthetic femoral tissue, femoral interface membrane, acetabular interface membrane	Prosthetic hip joint infection	VITEK 2 system and confirmed by 16S rRNA gene amplification	6 weeks of IV ceftriaxone followed by 6 weeks of ampicillin PO	6
2016	F	40 yrs	Abscess exudate	Scapular abscess	MALDI-TOF	Pristinamycine†	7
2019	M	9 yrs	Penile exudate	Balanoposthitis	Mass spectrometry, MALDI-TOF	amoxicillin-clavulanic acid PO	8
2019	M	75 yrs	Urine	Urosepsis	Gene sequencing using RAST and Prokka with phenotype resistance assessed by MIC	Ampicillin-sulbactam and vancomycin	9

M, Male; *F*, female; *IV*, intravenous; *MIC*, minimal inhibitory concentration; *PO*, peroral; *RAST*, radioallergosorbent test; *yrs*, years old.
*Treatment was unsuccessful in eradicating bacteria.
†Unknown if treatment was successful in eradicating bacteria.

improvement during hospital stay, no documentation of follow-up with infectious disease or surgery is available.

DISCUSSION

To our knowledge, only 7 clinical cases involving *Facklamia hominis* have been documented (Table I).[3-9] Little is known about its pathogenicity, and there is a possibility that *F. hominis* could be a contaminant in our study. However, this is less likely due to the fact that it was the only bacterial species grown in culture and due to the failed response to initial TMP-SMX therapy, which would have eradicated common bacteria found in HS-associated abscesses. As many rapid identification systems do not include this organism in their database, multiple methods have been used to identify *F. hominis*. A 2013 study found that matrix-assisted laser desorption ionization−time-of-flight (MALDI-TOF) was useful in identifying uncommon bacterial species.[10] MALDI-TOF was used successfully to identify *F. hominis* in the present case as well as in others.[7,8] Although there is no standardized method of identification for *F. hominis*, physicians should be aware of this method for potential use when this pathogen is suspected.

Proper treatment of *F. hominis* has also proved to be challenging for physicians. A variety of antibiotics have been used as treatment, including penicillins and third-generation cephalosporins (Table I). In this case, the patient was initially given PO TMP-SMX after incision and drainage, but it was unsuccessful; eradication was achieved with subsequent treatment with IV vancomycin and moxifloxacin. The key discussion point here is the failure of treatment. TMP-SMX was initiated prior to obtaining culture results for potential methicillin resistant *Staphylococcus aureus* coverage. Culture results however demonstrated the presence of *F. hominis*, which has shown responsiveness to ceftriaxone, amoxicillin, and ampicillin, but resistance to TMP-SMX.[2,3,5,6,8,9] Given the variable response to therapy, future studies pertaining to susceptibility are necessary in order to standardize treatment of care and avoid antimicrobial resistance.

CONCLUSION

This is a rare case of *Facklamia hominis* in a patient with HS. Although this pathogen is relatively uncommon in clinical settings, its increasing prevalence within the past few years necessitates a need for standardized identification and treatment. Physician awareness in conjunction with basic science research is vital to ensure proper care for every patient.

Conflicts of interest

None declared.

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