

Ertapenem rescue therapy in hidradenitis suppurativa



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INTRODUCTION

Hidradenitis suppurativa (HS) is a debilitating disease characterized by sinus tract and abscess formation leading to significant pain, scarring, and psychosocial distress. Although the pathogenesis is still unclear, recent findings suggest a basement membrane defect at the folliculopilosebaceous unit may contribute to the primary pathogenesis, with bacterial colonization as a secondary cause.¹ We present a case of a patient with HS meeting systemic inflammatory response syndrome (SIRS) criteria and the use of intravenous (IV) ertapenem.

CASE PRESENTATION

A 21-year-old South-Asian man with a history of Hurley stage III HS presented to the clinic with recurrent fevers, chills, and rigors. The patient was previously receiving infliximab infusions every 4 weeks and reported that his pain and fevers would begin approximately 3.5 weeks after each infusion then resolve spontaneously. Vital signs showed a fever of 102°F (38.9°C). On physical examination, the patient was ill appearing and with bilateral inguinal adenopathy associated with multiple erythematous, draining nodules and sinus tracts in the bilateral axilla and groin. Upper extremity range of motion was limited because of pain and extensive scarring.

Because of concerns for sepsis, the patient was hospitalized and a referral was placed to infectious disease specialists. On admission, laboratory evaluation found a white blood cell count of 18.5 K/ μ L. A wound swab grew *Escherichia coli*. Blood, urine, and tissue cultures yielded negative results. A

Abbreviations used:

HS:	hidradenitis suppurativa
IV:	intravenous
PICC:	peripherally inserted central catheter
SIRS:	systemic inflammatory response syndrome

concern for sepsis remained, and the patient was placed on empiric antibiotic therapy using IV ertapenem.

Three days after the initial ertapenem infusion, the patient's fever subsided, and he was discharged with instructions to continue IV ertapenem as an outpatient via a peripherally inserted central catheter (PICC) for 6 weeks. After completion of treatment, the patient had no fever recurrence and reported decreased pain. Physical examination found decreased drainage of HS lesions and increased range of upper extremity motion.

DISCUSSION

HS is a chronic, inflammatory, follicular disorder that presents significant treatment challenges, largely in part because the pathogenesis is not well understood. HS can progress to become a severely debilitating disease, leading to profoundly impaired quality of life in patients.² Although there are many new and emerging therapies, HS flares often remain difficult to control. Ertapenem represents a novel therapy with promising results.

Although bacterial involvement in HS pathogenesis remains unclear, colonization and infection with staphylococci, streptococci, and *Escherichia coli* are

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The patient described in this case report is also being described in a case series that is under consideration for a separate journal. The 2 articles are unique and unrelated, thus appropriate as separate submissions.

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currently considered a secondary event contributing to the inflammatory process.³ Prolonged treatment with antibiotics is often necessary before any improvement is seen. Additionally, it is suspected that bacterial biofilms contribute to the chronicity and recurrence of HS and the poor antibiotic response.⁴ The efficacy of ertapenem may be related to its ability to reduce biofilm formation in methicillin-sensitive *Staphylococcus aureus*.⁵

A recent study investigated the efficacy of ertapenem in 30 patients suffering from severe HS. Patients underwent 6 weeks of daily IV ertapenem infusions via a PICC line followed by consolidation treatment with rifampicin/moxifloxacin/metronidazole combination therapy for 6 weeks, which was then followed by rifampicin/moxifloxacin therapy for another 6 weeks. After therapy, patients reported decreased pain and discharge, as well as increased mobility, leading to improved quality of life. Two thirds of these patients also had a reduction in Hurley scoring after ertapenem therapy. The median Sartorius score decreased 20 points, indicating a decrease in the number and severity of HS lesions.⁶

The possible uses of ertapenem are slowly being uncovered. Ertapenem has been increasingly used to calm HS lesions, allowing for bridging to surgery or biologic therapy. Additionally, the once-daily IV ertapenem infusion via PICC line has been well tolerated and is manageable for patients.⁶

Although a bacterial source was not identified, we observed success using ertapenem therapy to manage his fever and leukocytosis. This 6-week course of ertapenem therapy also led to

improvements in symptoms related to HS including pain, local range of motion, and quality of life.

Ertapenem has been used for several different roles in the treatment of HS. This case highlights the role of ertapenem in patients with severe refractory HS who present with a disease flare. Collaborative efforts between dermatology and infectious disease have led to the development of new solutions to manage HS. Although further studies are needed, ertapenem appears to be a promising treatment for HS patients with concern for sepsis without an identifiable source.

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