

Intravenous Omadacycline as an Adjuvant Therapy to Ertapenem for Hidradenitis Suppurativa

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BACKGROUND

Hidradenitis suppurativa (HS) is a debilitating chronic skin disorder manifesting with painful pustules, nodules, abscesses, and sinus tracts often exacerbated by microbial organisms. While oral antibiotics are regarded as core HS therapies, the role of intravenous (IV) antibiotics for the most severe cases is being explored.

High efficacy and durability of IV ertapenem (EPNM) has been observed in HS; however, inflammation often persists in advanced disease after 12-16 weeks. Several of our patients were prescribed IV omadacycline (IV/OMCN), a broad-spectrum antibiotic for acute bacterial skin and skin structure infections (ABSSSI), as a follow-up to IV/EPNM in an attempt to minimize and/or reduce this inflammation.

OBJECTIVE

To investigate the usage of IV omadacycline as a novel follow up treatment to IV ertapenem for advanced HS.

METHODS

We conducted an IRB-approved retrospective chart review of 20 patients receiving care at the Einstein/Montefiore HS Center (HSC); 10 completed courses of IV/EPNM followed IV/OMCN (mean duration of 5-weeks), while a comparison group received IV/EPNM only.

Both groups had similar baseline HS-Physician Global Assessment (HS-PGA) and Numerical Rating Scale pain scores (NRS-Pain). Demographic and clinical information were obtained from the electronic medical record.

RESULTS

The average age was comparable in both the IV/EPNM+IV/OMCN and IV/EPNM only groups (Table 1). The male/female ratios were reversed in both groups. Racial distribution, HS-PGA and NRS-Pain at baseline and end-IV/EPNM were similar. By contrast, IV/EPNM+IV/OMCN was associated with significant improvement of HS-PGA (2.7 ± 1.16 , 4.0 ± 1.054 , $p = 0.017$); as well as significant reduction of NRS-Pain (2.7 ± 2.11 , 6.0 ± 2.67 , $p < 0.01$).

Table 1. Comparison of IV EPNM to IV EPNM Plus IV OMCN

Variable, $\bar{x} \pm SD$	IV Ertapenem (n = 10)	IV Ertapenem Plus IV Omadacycline (n = 10)	p-value
Sex			
Male	6	3	
Female	4	7	
Age (y)	37.0 ± 13.0	38.1 ± 9.7	0.83
Ertapenem course length (w)	13.6 ± 4.0	14.6 ± 4.2	0.59
Baseline HS-PGA (pre-ertapenem)	4.5 ± 0.7	4.5 ± 0.7	>0.99
End-ertapenem HS-PGA	3.7 ± 1.1	3.3 ± 1.4	0.48
Post-ertapenem HS-PGA	4.0 ± 0.3	2.7 ± 1.2	0.02*
Baseline NRS-Pain (pre-ertapenem)	5.6 ± 2.9	4.5 ± 3.5	0.46
End-ertapenem NRS-Pain	3.4 ± 3.0	3.4 ± 2.9	>0.99
Post-ertapenem NRS-Pain	6.0 ± 2.7	2.7 ± 2.1	<0.01**
Number of weeks post-ertapenem to follow-up visit	9.2 ± 9.9	3.7 ± 1.5	0.12

DISCUSSION

In this study, HS severity and NRS-Pain were significantly improved by the combination of IV/EPNM+IV/OMCN as compared to those receiving IV/EPNM only. These data suggest a potential new addition to the HS treatment arsenal. Small sample size is a study limitation but further studies of omadacycline, including oral formulations and IV/OMCN monotherapy warrant further investigation in HS management.

