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RESEARCH LETTER

The effect of oral clindamycin and rifampicin combination therapy in patients with hidradenitis suppurativa in Singapore

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Harumi Ochi
Lixian Chris Tan
Hazel H Oon

Department of Dermatology, National Skin Centre, Singapore

Abstract: Hidradenitis suppurativa (HS) is a chronic inflammatory disease of follicular occlusion characterized by abscesses, draining sinuses, and scarring. The efficacy and tolerability of combination treatment with oral clindamycin and rifampicin have previously been assessed in 4 studies including groups of Caucasian patients. Overall results are promising with reported improvement rates between 71.4% and 85.7%. In this study, we propose that combination therapy is safe and efficacious in the treatment of HS, not only among Caucasians, but also in a group of Asian patients in Singapore.

Keywords: hidradenitis suppurativa, combination therapy, clindamycin, rifampicin

Introduction

Hidradenitis suppurativa (HS) is a chronic inflammatory disease of follicular occlusion. Although HS is not primarily an infectious disease, *Staphylococcus aureus* and *Staphylococcus epidermidis* are pathogens most frequently isolated as secondary colonizers.[1] In this study, we propose that combination therapy with oral clindamycin and rifampicin is efficacious in the treatment of HS in a group of Asian patients in Singapore.

Methodology

This retrospective study assessed the efficacy of a 10-week course of oral clindamycin 300 mg twice daily and oral rifampicin 300 mg twice daily in the treatment of HS. Patients who received this combination therapy between 1 December 2012 and 31 July 2013 in a tertiary dermatological center in Singapore were included.

This study was approved as an audit by the Head of Acne Clinic of National Skin Centre (NSC), Singapore. As this was performed retrospectively, permission to access the medical records of the patients was granted by the Director of NSC. Patient consent was waived by the Head of Acne Clinic as data were de-identified and retrospective.

Results

Eleven patients (9 males) had a mean age of 24.5±8.8 years. There were 6 Chinese (54.5%), 4 Malays (36.3%) and 1 Indian (9.1%). Five were smokers (45.5%), 6 were obese (54.5%) and 1 had a family history of HS (9.1%). The duration of HS prior to commencement of oral clindamycin and rifampicin ranged from 2 to 20 years. Eight patients (72.7%) had previous treatments, including retinoids and antibiotics, with limited effect and persistent disease. At the end of 10 weeks of treatment, 7 of the

Correspondence: Harumi Ochi
Department of Dermatology, National Skin Centre, 1 Mandalay Road, 308205, Singapore
Tel +65 6253 4455
Fax +65 6253 3225
Email ochi.harumi@mohh.com.sg

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11 patients (63.6%) reported clinical improvement. Four patients had digital photography documenting response before and after treatment, and 2 blinded assessors evaluated the improvement using the HS Physician Global Assessment (PGA) score. Three patients achieved clear, minimal or mild scoring from all sites after completion of therapy, and 2 patients reported a 2-grade improvement relative to baseline from at least 1 site. There was only 1 patient (9.1%) who reported side effects of nausea and vomiting and 1 patient (9.1%) who defaulted follow-up (Table 1).

Discussion

The efficacy and tolerability of this combination treatment had previously been assessed in 4 studies. Overall results are promising with reported improvement rates between 71.4% and 85.7%.[1–4] Statistically significant improvements in all quality-of-life dimensions of the Skindex-France questionnaire were also described in 1 study.[2]

It is hypothesized that both the antibacterial and anti-inflammatory properties of clindamycin and rifampicin are responsible for the beneficial effects in treating HS. Clindamycin is a lincosamide antibiotic that is active against Gram-positive cocci and anaerobic bacteria. It mediates inflammation by suppressing complement-derived chemotaxis of polymorphonuclear leukocytes. Rifampicin is a lipid-soluble, broad-spectrum antibiotic highly effective against *S. aureus*. Additionally, it modifies cell-mediated hypersensitivity by suppressing antigen-induced transformation of sensitized lymphocytes. Rapid emergence of bacterial resistance may result with rifampicin monotherapy.[5] Hence, combination therapy is synergistic with reduced resistance rates and increased anti-inflammatory properties. Although

Table 1 Demographics of patients, previous treatments, response and side effects of combination therapy

Case number	Age (years)	Gender	Duration of disease (years)	Affected area(s)	Prior therapy	Physician clinical assessment	Pretreatment PGA score	Posttreatment PGA score	Reported side effects
1	18	Male	2	Axilla, neck	Doxycycline, topical clindamycin	Improved	Nil	Nil	Nil
2	18	Male	4	Perineal	Doxycycline, erythromycin, isotretinoin, minocycline	Improved	Nil	Nil	Nil
3	19	Male	9	Perineal	Bactrim, cephalexin, doxycycline, erythromycin, isotretinoin, minocycline	Improved	2.75	1.50	Nil
4	20	Male	6	Perineal, axilla	Augmentin, topical clindamycin	Nonresponder	Nil	Nil	Nil
5	21	Male	13	Perineal, axilla	Doxycycline, topical clindamycin	Improved	2.67	1.00	Nil
6	21	Male	3	Perineal, axilla, neck	Nil	Improved	1.75	2.00	Nil
7	21	Male	3	Perineal, back	Defaulted	Defaulted	Nil	Nil	Nil
8	22	Male	5	Perineal	Isotretinoin, minocycline, topical clindamycin	Improved	Nil	Nil	Nil
9	48	Male	20	Perineal, axilla	Augmentin, acitretin. ciprofloxacin, clindamycin, ceftriaxone, isotretinoin, infliximab	Nonresponder	3.13	3.00	Nil
10	27	Female	7	Perineal, axilla	Doxycycline, isotretinoin	Nonresponder	Nil	Nil	Nausea, vomiting
11	35	Female	2	Perineal, axilla	Nil	Improved	Nil	Nil	Nil

Abbreviation: PGA, Hidradenitis Suppurativa Physician Global Assessment.

Table 2 Summarized data of the available studies on rifampicin–clindamycin in HS

Reference	Number of patients	Treatment modalities	Assessment of the severity of HS	Number of patients with improvement	Number of patients with side effects
Bettoli et al[1]	23	Rifampicin 600 mg and clindamycin 600 mg for 10 weeks	Sartorius Number of exacerbations	17/20 (85%)	3 (13%)
Gener et al[2]	116	Rifampicin 600 mg and clindamycin 600 mg for 10 weeks	Sartorius Hurley Skindex-France questionnaire HS Patient Global Assessment	60/70 (86%)	10 (14%)
Mendonça and Griffiths[3]	14	Rifampicin 600 mg and clindamycin 600 mg for 10 weeks	No specific score	10/14 (71%)	4 (29%)
van der Zee et al[4]	34	Rifampicin and clindamycin different dosages and duration	Hurley Investigator total assessment	28/34 (82%)	13 (38%)
Present study	11	Rifampicin 600 mg and clindamycin 600 mg 10 weeks	HS Physician Global Assessment	7/11 (63.6%)	1 (9.1%)

Abbreviation: HS, hidradenitis suppurativa.

a longer duration of treatment appears warranted in chronic diseases like HS, no large differences in outcome between patients treated for 10 weeks or more and those treated for a shorter period have been reported.[4]

Other studies have similarly described good tolerability with low rates of side effects between 13.0% and 38.2% (Table 2). Gastrointestinal complaints were most commonly reported, but there were no cases of clindamycin-associated *Clostridium difficile* colitis.[1–4]

In a recent systematic review of HS treatment, only combination clindamycin–rifampicin regimen, infliximab, Nd:YAG laser and surgical excision were considered effective treatments. However, some of these modalities have limitations. Infliximab has resulted in adverse events including severe allergic reactions, multifocal motor neuropathy and drug-induced lupus reactions. Recurrence rates of up to 42.8% after surgical excision have also been described.[6]

Conclusion

Oral clindamycin and oral rifampicin combination therapy is safe and efficacious in the treatment of HS in groups of Caucasian and Asian patients in Singapore.

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Disclosure

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