Research letter

Treatment of hidradenitis suppurativa with rifampicin: have we forgotten tuberculosis?

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Dear Editor, Hidradenitis suppurativa (HS) is a chronic, recurrent and debilitating skin disease of the hair follicle that is accompanied by systemic inflammation. Treating HS is challenging, and therapeutic tools as diverse as topical and systemic antibiotics, biologics, intralesional steroids, surgical procedures or light and laser therapies are frequently needed. The combination of oral clindamycin and rifampicin has been suggested as a possible treatment regimen.

Five studies have evaluated the efficacy of this combination, the majority of which reported the use of clindamycin 600 mg daily + rifampicin 600 mg daily with an average length of 10 consecutive weeks.[1–5] In three out of four studies, 10-week follow-up yielded complete remission in 32% (32/116) of patients[1–3]; in another study, a 1-year follow-up demonstrated sustained efficacy in only seven of 26 patients.[5] Scheinfeld has discussed why rifampicin is a key drug in the treatment of HS, pointing out its antibacterial and anti-inflammatory effects, its activity on bacterial biofilms, its effect against granulomas and its immunomodulatory properties on neutrophils.[6]

Rifampicin and the related rifamycins are the cornerstone of the therapy for active tuberculosis (TB). Its use for other entities besides mycobacterial infections can hamper the future of TB control and elimination, either by the emergence of resistant strains or by the development of hypersensitivity reactions that may contraindicate a future use of the drug. Spontaneous mutations of *Mycobacterium tuberculosis* can cause decreased susceptibility to rifamycins, and antibiotic pressure from monotherapy can result in the selection of these mutants and the emergence of acquired drug resistance.[7]

During therapy of active TB disease, the emergence of rifamycin resistance occurs only if one accidentally treats it with a single drug without the coverage of the other antituberculosis drugs.[7] By prescribing the combination of clindamycin and rifampicin, dermatologists are actually using rifampicin alone as far as TB is concerned. This happens because clindamycin has no tuberculostatic properties and patients with HS are not routinely screened for TB before starting clindamycin–rifampicin. Kayigire *et al.* recently published a study that reinforced the importance of this problem.[8] Fourteen newly diagnosed patients with TB were treated with rifampicin for only 14 days and bacterial loads were determined, including mutation frequencies. Using a statistical model to estimate the rate of spontaneous mutations conferring resistance to rifampicin in these patients, the authors concluded that 1% of the remaining viable mycobacteria could already be resistant after 30 days of monotherapy.[8]

One could wonder whether combining two tuberculostatic drugs to treat HS could minimize this issue. Moxifloxacin is a second-line agent to treat TB. A retrospective case series study evaluated the efficacy and safety of rifampicin + moxifloxacin + metronidazole for the treatment of HS in 28 patients; despite the study's methodological heterogeneity, it was clearly shown that frequent (gastrointestinal disorders) and potentially serious (tendon rupture) side-effects should limit the use of this combination.[9] However, even if rifampicin and moxifloxacin are used simultaneously and a concomitant TB diagnosis is missed, this regimen would still not be appropriate to treat TB.

Hypersensitive reactions are infrequent in immunocompetent patients treated with daily tuberculostatic regimens. Nevertheless, there are some risk factors associated with the development of sensitization; prior treatment with rifampicin and poor compliance with intermittent dosages are two of them.[10] Should a patient develop TB in the future, prior intermittent treatments with rifampicin, like those used for HS, will naturally increase this risk.

The potential of rifampicin to treat HS has been acknowledged, but all the pros and cons of its use must be thoughtfully considered. One must critically review its ability to induce remission, the ultimate goal when treating these patients, and consider alternative drugs for the management of a chronic condition like HS. If it is at all needed, we advocate systematic screening for TB in all patients with HS prior to commencing clindamycin–rifampicin or other antibiotic schemes including rifampicin, particularly in areas with high or intermediate incidence rates of TB or in populations with known risk factors. If a latent or active disease is diagnosed, a multidisciplinary approach involving a TB specialist is recommended.

On the whole, the rifamycins have transformed the treatment of tuberculosis over recent years, and protecting their tuberculostatic activity is critically important.

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