Commentary

Time to change the established dogma on the diagnostic staging of hidradenitis suppurativa

Hidradenitis suppurativa (HS) is a chronic inflammatory condition, which significantly impacts the psychosocial health of affected individuals. While diagnosis is largely clinical, examination is limited by the inability to appreciate deeper lesions and the true extent of regional involvement. Clinical severity scores, such as Hurley's and the International HS Severity Score System (IHS4), are widely used to determine clinical severity and guide treatment decisions. However, the recent focus on ultrasound (USG) imaging using high-frequency probes has highlighted the significant underestimation of disease severity by clinical assessment alone. High-frequency ultrasound (HFUS) uses frequencies above 15 to 20 MHz, and ultra-high-frequency ultrasound (UHFUS) uses frequencies higher than 30 MHz. HFUS and UHFUS can detect dermal thickening, pseudo cystic nodules, fluid collections in dermis/hypodermis, fistulous tracts, micro tunnels, microcysts, etc., all of which cannot be assessed by clinical examination alone.[1,2] Further, lesions clinically palpated as nodules may present as fluid collections, pseudocysts, or tunnels when assessed on HFUS, potentially altering therapeutic outcomes. Rao *et al*.[3] present an insightful study in this issue, correlating clinical and HFUS-based staging in 46 HS patients. The authors used Hurley's clinical staging, while HFUS and colour-doppler staging were done using sonographic scoring of the HS (SOS-HS) score. The primary outcome measure was to find the correlation between these two parameters. More than 50% of patients showed a more severe disease (higher staging) by SOS-HS as compared to Hurley staging. Michelucci *et al*. also reported similar results when comparing the IHS4 clinical score with UHFUS. As per clinical IHS4, 23%,58.2%, and 18.9% patients were classified as mild, moderate, and severe, respectively. Distinctly, the percentages were 11.5%, 69.7%, and 18.9% according to the UHFUS examination.[4] Similarly, in a multicentric study involving 122 patients with HS, Martorell *et al*. reported that in 44.7% of their patients, staging changed to a more severe stage following USG evaluation.[5] Thus, by providing critical objective information in real-time, USG leads to more accurate staging than clinical examination alone.[1] Further, colour-doppler provides useful information about the inflammatory activity of HS lesions by assessing the degree of vascularisation.[3] More precise staging would ultimately affect management decisions, mainly related to the early introduction of biologics and surgical methods. Importantly, it seems that by the time a case of HS presents to, and is diagnosed by a dermatologist, it is often beyond the scope of conventional medical treatments such as antibiotics. Considering this, and conforming to the tenets of antimicrobial stewardship, it may already be time to move up the therapeutic ladder. Gogate *et al*. reported that following USG assessment, management in 26% of their patients changed from medical to surgical.[6] A USG assessment can also help in surgical planning by delineating the precise extent and depth of the disease, which can pave the way for less invasive procedures. A modification of SOS-HS (mSOS-HS), based on UHFUS imaging, has recently been proposed by Wartsman *et al*., along with a new activity staging called Ultrasound Hidradenitis Suppurativa Activity Scoring (US-HSA). This is aimed at providing better anatomical information and assist in making more informed decisions in clinical settings, apart from providing objective assessments for follow-ups in clinical trials.[7] Rao *et al.* also suggest the utility of USG in treatment follow-up by noting a reduction in the size/disappearance of lesions and a decrease in signals on performing colour-doppler.[3]

A limitation that remains, however, is the logistic challenge of performing USG in severely discharging and painful lesions, and in anogenital regions. The assessment would also add to the cost of treatment and time of assessment, requiring referrals to another department. Training of dermatologists in USG assessment may obviate the need for the latter, and smaller and portable handheld machines now available can be kept in outpatient clinics as well. However, the strict Pre-Natal Diagnostic Techniques (PNDT) regulations for USG machines in the country may be a deterrent for this, even in teaching departments.

Lastly, although USG clearly adds to the clinical assessment of HS, there is yet no prospective data that documents better

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long-term therapeutic outcomes following the use of imaging techniques in the initial assessment and follow-up of HS patients. We hope this is taken up by Rao *et al*. and other researchers in future studies to establish the place of USG in HS management.[3]

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