Cellulitis in chronic oedema

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Cellulitis (also known as erysipelas) is a common infection of the skin and subcutaneous tissues, and therefore falls within the domain of dermatologists. Cellulitis, which can often be recurrent, is among the top 10 reasons for admission to hospital, with patients receiving treatment from many specialties including emergency care, general practitioners, general medicine, surgery, tissue viability and dermatology.[1]

In this issue of the *BJD*, Burian *et al.*[2] examine the prevalence of cellulitis in patients with chronic oedema. Chronic oedema is an easily identified clinical sign and leads to the same pathophysiological effects and appearances as lymphoedema, which is not so easily distinguished. Tissue fluid is predominantly drained by the lymphatic system and not by venous reabsorption as was previously thought.[3] This means that all chronic oedema, i.e. subcutaneous oedema persisting for at least 3 months, is caused either by an absolute reduction in lymph transport, as in lymphoedema, or by lymph drainage being overwhelmed by a fluid (lymph) load, such as that which occurs with higher venous pressures from heart failure or venous disease. Therefore, chronic oedema always represents lymph drainage failure, and as it is easy to identify and has the same physiological effects, it can be considered a surrogate for lymphoedema.[4] As lymph carries antigen related to infection as well as lymphocytes for an appropriate immune response, disturbed lymph drainage, whether owing to fluid load or lymph vessel dysfunction, results in immunodeficiency as a consequence of the disturbed immune cell trafficking.[5]

The novel findings from this publication are that one-third of patients with chronic oedema are likely to develop cellulitis at some point. The worse the oedema, the more likely cellulitis is to occur; the better the oedema, the less likely cellulitis is to occur. The strengths of this publication are the large number of patients included for study and the international collaboration involving nine countries, indicating that chronic oedema predisposing to cellulitis is a global healthcare burden – at least in these countries. By targeting healthcare professionals with an interest in lymphoedema to identify patients, numbers may have been falsely elevated and more severe cases included compared with the population at large, but this does not undermine the value of the results. Unfortunately, data on recurrent cellulitis were not included and this is likely to be a common occurrence. As shown previously, cellulitis can be self-perpetuating with past episodes making future episodes more likely.[6] While prophylactic penicillin has been shown to be of value in preventing cellulitis,[6] this study demonstrates the importance of controlling the chronic oedema in preventing cellulitis, a finding recently confirmed by the use of compression garments to prevent cellulitis.[7] So often in healthcare, patients are treated for the acute episode of cellulitis and discharged without sufficient consideration being given to treatment of the risk factors, such as chronic oedema, skin disease and wounds. Dermatologists are well placed to manage such conditions and therefore should be more involved in cellulitis care. The Norwich model has shown the value of dermatological input for cellulitis,[8] particularly as red legs do not always mean cellulitis and mismanagement frequently occurs.[9]

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