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Novel dermoscopic hexagonal pattern in chronic graft-versus-host disease

Running Head: Novel dermoscopic sign in chronic GVHD

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Novel dermoscopic hexagonal pattern in chronic graft-versus-host disease

Graft-versus-host disease (GVHD) remains a major cause of morbidity and mortality following allogeneic haematopoietic stem cell transplantation (HSCT). The principal targets of GVHD include the skin, gastrointestinal tract, and liver.¹ The late phase cutaneous manifestations of chronic GVHD include a disabling sclerodermatous skin reaction, including severe poikiloderma with widespread cutaneous sclerosis, contractions, focal ulceration, wasting and alopecia.

We report a 53-year-old man presenting for post-transplant skin surveillance, who underwent an allogeneic HSCT eighteen months prior from a matched sibling donor with fludarabine and melphalan conditioning for refractory T-cell prolymphocytic leukaemia. Within the first month following HSCT, he developed biopsy-confirmed acute cutaneous GVHD with mixed spongiotic and lichenoid reaction pattern. Other affected sites included pulmonary and ocular GVHD, necessitating immunosuppressive therapy with prednisolone 20 mg daily and mycophenolate 1 g twice-daily. Over the eighteen months following HSCT, he developed chronic GVHD, complaining of increasing skin thickening, which was largely asymptomatic. Current topical therapy included betamethasone 0.5 mg/g cream daily to affected areas and regular emollients.

On examination, there were symmetrical induration of the skin of the limbs and trunk in discontinuous pattern on a background of diffuse poikiloderma. He also had a striking pattern of hyperpigmentation on his upper arms (Figure 1). Dermoscopic examination of these areas revealed a hexagonal pattern of grey-blue and brown dots (Figure 2). The

biopsies showed features of chronic GVHD involving the skin. Limited lichenoid changes are evident (Figure 3). The superficial dermis shows prominent melanin pigment incontinence (post-inflammatory type) (Figure 3), which would correlate with the dermoscopic appearance. There are sclerodermoid changes in the background dermis.

Dermoscopy is becoming an increasingly useful tool for assisting in the diagnosis of dermatoses beyond skin cancer. To date, only dermoscopic examinations of acute GVHD had been reported, which included a non-specific observation of linear vessels and multiple telangiectasia in acute GVHD patients.² We report a novel dermoscopic description of hexagonal hyperpigmentation in the setting of chronic GVHD.

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Figure 1: Macroscopic appearance of chronic cutaneous GVHD of the upper arm.

Figure 2: Dermoscopic examination demonstrating a hexagonal pattern of brown and grey dots.

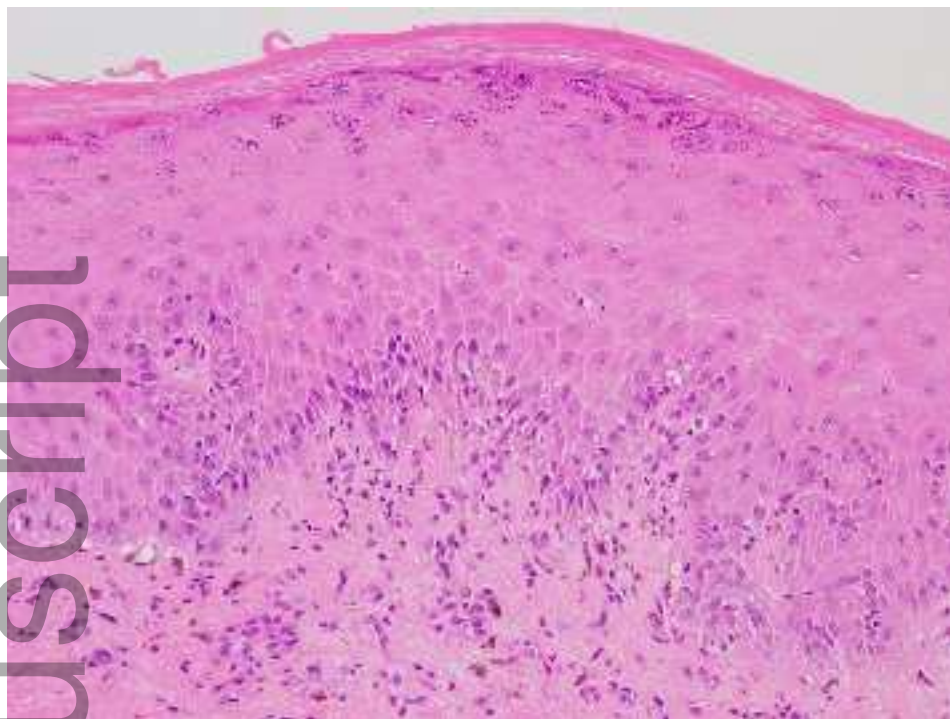
Figure 3: Histological findings of chronic cutaneous GVHD demonstrating lichenoid changes and melanin pigment incontinence, correlating with the dermoscopic appearance. (H&E staining, magnification x200)



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