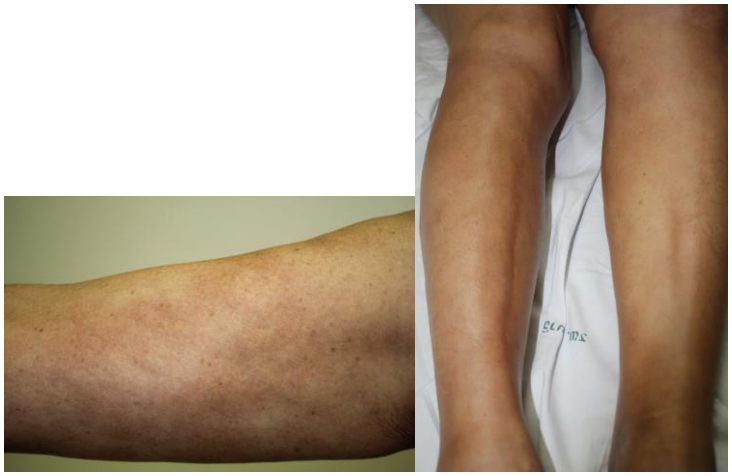
Case 23
A 60-year-old Thai woman from Bangkok
Chief complaint: Hyperpigmented sclerotic plaques on trunk and extremities for 1 month.

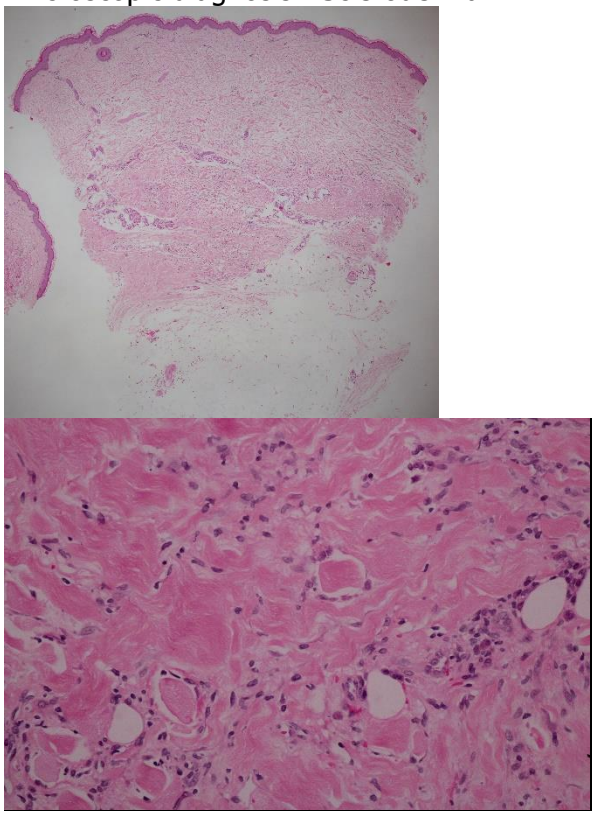


Present illness: Three months earlier, the patient noticed of multiple discrete erythematous edematous, mild tender plaques predominantly on extremities. She had fewer lesions on the trunk. She denied Raynaud's phenomenon symptoms, sclerodactyly, dysphagia, arthralgia or arthritis. No significant weight loss or fever was noticed. Two months earlier, sclerosis developed centrally in the plaques, expanding and turned to brownish sclerotic plaques. No chest discomfort symptom or systemic illness was complained.

Past history
She was otherwise healthy and regularly followed up dermatology clinic for female pattern hair loss and melasma.

Skin examination
-Multiple ill-defined sclerotic erythematous and brownish edematous plaques scattered on upper chest, lower abdomen and all extremities (pictures show right upper arm and both lower legs)
-No facial involvement
-No digital pitting scar, no sclerodactyly
-Normal nail fold capillary

Histopathology (S15-023617, right arm)
-Interstitial inflammatory cell infiltrate of lymphocytes admixed with a few plasma cells in lower epidermis
-Sclerosis of collagen bundles within inflamed dermis
-Microscopic diagnosis : Scleroderma



Investigation:
ANA –positive fine speckle 1:320, nuclear dots 1:320
Negative for anti- Scl70, anti- centromere

Diagnosis: Generalized morphea

Treatment: Methotrexate 5 mg/week was started.
Surveillance for systemic symptoms and musculoskeletal involvement.

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Discussion:

Morphea or localized scleroderma is a rare fibrosing disorder of the skin and underlying tissues that causes thickening of the skin. Morphea can cause significant morbidity but does not affect mortality, whereas systemic sclerosis has the highest disease specific mortality of all autoimmune connective tissue disease[1].

Several types of morphea exist and each has different clinical manifestations and levels of connective tissue involvement. The most widely used classification in the literature is the Mayo clinic classification, namely: plaques, generalized, bullous, linear and deep morphea[2].

Generalized morphea is defined as morphea plaques involving more than or equal to four lesions on at least two body sites. It is more frequent in women, and physical exercise has been cited as a triggering factor. The plaques are slightly inflamed, pigmented, ill-defined, thickened, adhered to deep planes, fascia and muscle, and most common on the trunk and extremities. Sclerosis onset is gradual and relatively fast over a period of months[3]. Generalized morphea is different from systemic sclerosis, patient may develop sclerosis of the fingers but usually do not present ulceration, phalanx resorption, changes in capillaries nail fold or Raynaud's phenomenon, which occur in the systemic sclerosis. The face is generally spared. In addition, the presence of flexion contracture of the joints and muscle-joint manifestation are common[4].

Cutaneous lesions begin with erythematous plaque or patch (inflammatory stage). Hypopigmented sclerotic plaque progressively develops at the center of lesion which turns into a shiny white color (sclerotic stage). The sclerotic plaque eventually becomes soft, atrophic, and hypo-hyperpigmented (atrophic stage).

The underlying etiology of morphea remains elusive. The development of morphea is likely a multifactorial process such as genetic factors, environmental factors (trauma, medications, and infection) that may cause microvascular injuries resulted in a release of various adhesion molecules. Subsequently induced T-cells activate the release of profibrotic cytokines such as TGF-β, SMAD proteins, platelet-derived growth factor, connective tissue growth factor and IL-4,6,8 chemokines. At the end, this process leads to excessive collagen production and decreased MMP which is responsible for collagen degradation[5].

In systemic sclerosis, highly specific antibodies exist for limited (anticentromere antibodies) and diffuse (anti-Scl-70 antibodies) disease. Such parameters are absent in morphea. However, a high incidence of autoimmune phenomenon has been reported in morphea patients. Serum antinuclear antibodies, most of them with a homogenous pattern, have been detected in 20% to 80% of morphea patients[5]. Anti single-stranded DNA, antidouble-stranded DNA, antihistone, anitopoisomerase IIα, antiphospholipid antibodies and rheumatoid factor have also been reported in patients[3].

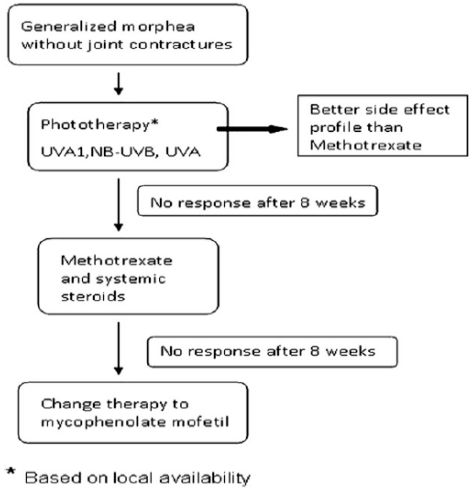
Histopathologic features of morphea, in early

inflammatory stage, there is thickened collagen bundles within the reticular dermis that run pararell to the skin surface with dense inflammatory cell infiltrates between collagen bundles, around blood vessels, and around sweat glands. The cell infiltrate mainly consists of lymphocytes, but plasma cells, histiocytes, eosinophils may be present as well. In late fibrotic stage, lesions become avascular and have little ongoing inflammation. Collagen fibers are tightly packed and highly eosinophilic. Sweat glands are atrophic or absent.

As mentioned above, morphea does not increase mortality, however it is associated with significant morbidity, functional and aesthetic impairment. Data on adult morphea patient comorbidities is sparse. Adult with morphea have been reported to have increased risk for concomitant autoimmune disorders[6]. Both children and adults with morphea have higher levels of depression and anxiety than healthy, age-matched controls[7, 8].

For the treatment option of morphea, can be divided into topical and systemic therapy as well as ultraviolet phototherapy. According to broad spectrum of clinical subtype of morphea, the extent and severity of disease should be evaluated before initiating the treatment. Proposed the treatment algorithm of generalized morphea was shown in Fig1[9].

In our case, we prescribed systemic therapy (methotrexate) rather than phototherapy due to inconvenience for traveling to hospital. Methotrexate 5 mg per week was recently started and was planned for dose increment until adequate response was achieved.



References

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