The ultrasonographic features in this case are different from those in two previous reported cases in radiology literature. In those reports, intravascular GP showed mild to moderate echogenecity with hypervascularity,[5,6] whereas our case showed hypoechogenecity with minimal vascularity. Decreased vascularity in our case may be secondary to the large size compromising the blood flow.

Histopathologic examination of excised specimen is necessary to differentiate intravenous lobular capillary haemangioma from other intravascular lesions such as angiosarcoma, intravascular papillary endothelial hyperplasia, intravenous atypical vascular proliferation, intravascular fasciitis and organized thrombus. Surgical excision is also curative, with no tendency for recurrence or haematogenous spread.[1]

Because intravascular GP is commonly located in the deep parts of the neck and upper extremities, it is often regarded as an enlarged lymph node, arteriovenous fistula and bronchial cleft cyst.[1] Intravascular GP is usually asymptomatic and occurs without a history of preceding trauma.[7] Therefore, dermatologists should be aware of intravascular GP as a differential diagnosis of subcutaneous nodules in the above mentioned areas and consider ultrasonography as a first-line diagnostic tool.

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Acute generalized exanthematous pustulosis caused by sennoside in a patient with multiple myeloma

Editor

Acute generalized exanthematous pustulosis (AGEP) involves an erythematous eruption with numerous sterile pustules associated with neutrophilic leucocytosis. AGEP has been distinguished from pustular psoriasis and underlined drugs as its main aetiology.[1] Although sennoside is one of the most commonly used laxatives, its AGEP induction has not been reported. We report the first case of AGEP caused by sennoside. A possible association of AGEP occurrence with multiple myeloma is also documented.

A 74-year-old woman, who had suffered from multiple myeloma and chronic renal failure, presented with a 5-day history of a widespread, pruritic eruption. Her medications included sennoside, aspirin, famotidine and alfacalcidol, all of which were taken for 1 year. On examination, an erythematous eruption was stubbed with non-follicular 1- to 2-mm papules and pustules. The lesions favoured the flexor aspects of four extremities (fig. 1a) but not the mucosal area. Her temperature was 37.4 °C. The peripheral blood sample showed an elevated leucocyte count of 11 100/μL with a high number of neutrophils (10 223/μL) and high levels of blood urea nitrogen (50 mg/dL; normal, 8–22), creatinine (7.0 mg/dL; normal, 0.4–0.7), C-reactive protein (5.0 mg/dL; normal, < 0.2) and immunoglobulin G (3193 mg/dL; normal, 851–1702). Bacterial cultures of the throat and cutaneous pustules were negative. A skin biopsy specimen taken from a left thigh showed an infiltrate of numerous neutrophils and eosinophils in the upper dermis with subcorneal pustules (fig. 1b). Although results of patch test for the drugs were all negative, lymphocyte stimulation test was positive for sennoside, with a stimulation index of 4.49 (normal, < 1.8) (fig. 1c). According to the reported score,[2] our patient was a definite case of AGEP with a value of 11 points (no AGEP, 1–4; possible, 5–7; and definite, 8–12). She was diagnosed as AGEP caused by sennoside. After discontinuation of sennoside, she was treated with oral prednisolone (20 mg daily) and topical betamethasone butyrate propionate

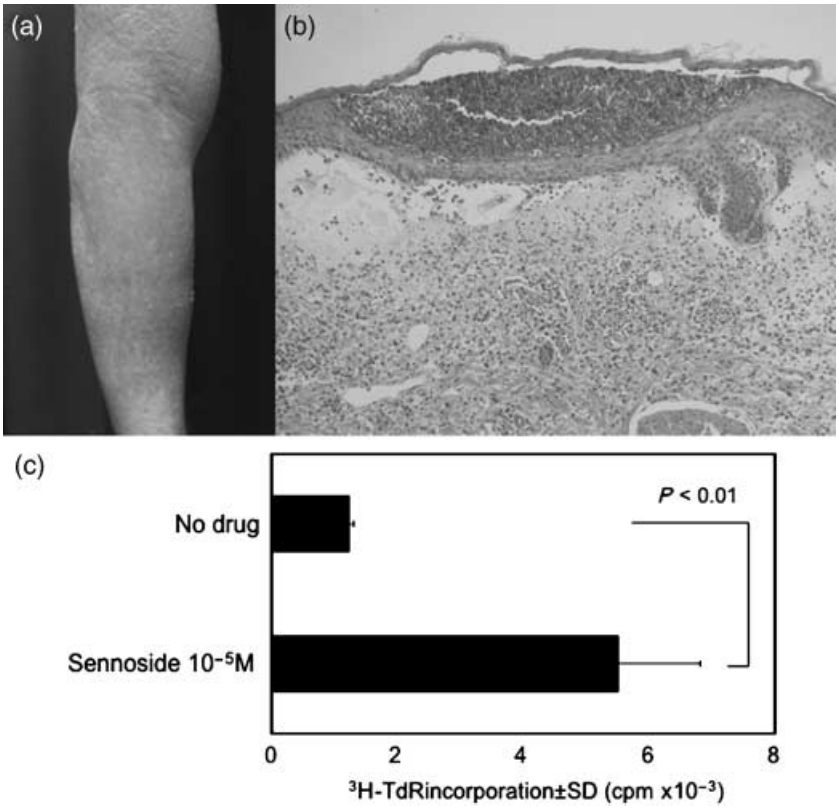

fig. 1 (a) Clinical appearance of multiple papules and tiny pustules on the lower limb. (b) Histologic appearance of a pustule, showing a subcorneal pustule, papillary dermal oedema and a perivascular infiltrate of lymphocytes (haematoxylin and eosin stain; original magnification ×25). (c) Lymphocyte stimulation test, showing proliferation of the patient's peripheral blood mononuclear cells in response to sennnoside at 10^{-5} m (optimal concentration) in the culture system described previously.[6]

ointment. The eruption began to clear 1 week after the treatment. Prednisolone was tapered and discontinued 6 weeks later.

Our case suggests that sennoside can be a causative agent for AGEP. The eruption appeared 1 year after starting sennoside intake. Latency periods between the administration of drugs and the onset of AGEP are usually short, as AGEP typically occurs 1 or 2 days after the drug intake.[1] In the majority of cases, therefore, previous sensitization is assumed. In several cases, however, the first episode of AGEP occurred 1 to 3 months after the administration of a new drug.[3] Our patient further suggests that AGEP occasionally develops during a long time.

The mechanism of AGEP remains unfully elucidated. However, a delayed drug hypersensitivity reaction has been suggested by positive patch tests and lymphocyte stimulation tests. In our patient, her lymphocytes proliferated well in response to the culprit drug, indicating T-cell-mediated sensitization of hypersensitivity. A model of T cell-neutrophil interaction has been proposed in the pathogenesis of AGEP.[4] A subgroup of drug-specific T cells secrete neutrophil-attracting chemokines, interleukin-8 and granulocyte monocyte colony-stimulating factor (GM-CSF),[4] resulting in the occurrence of pustular eruptions. Thus, stimulation of T cells with a culprit drug is the primary event and activation of neutrophils follows. The positive lymphocyte stimulation test supports this notion. Our patient had multiple myeloma, in which plasma cells produce GM-CSF and induce neutrophilia.[5] Likewise, preferential occurrence of AGEP has been reported in chronic myeloid leukaemia.[3] The myeloma-associated condition as well as the sennoside-sensitized T cells seem to form AGEP in our patient.

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Treatment of plaque-type localized scleroderma with retinoic acid and ultraviolet A plus the photosensitizer psoralen: a case series

Editor

Localized scleroderma (LS) can manifest in localized or disseminated indurated plaques limited to the skin. Although photochemotherapy with ultraviolet A plus the photosensitizer psoralen (PUVA) has been used widely in the treatment, there are few reports on the usage of oral retinoic acid in this disease. Retinoic acid and its derivates lead to an increase in collagen and a decrease in collagenase production.[1,2] We evaluated the response of the combination of retinoic acid and PUVA (Re-PUVA) treatment in four patients with LS.

The four cases were summarized in Table 1. The diagnosis of all patients was confirmed by the clinical and histologic findings. All cases were evaluated by modified skin score (MSS) described by Zachariae *et al*. before and after the treatment by the same author (MÖ).[3]

During the first 2 weeks, patients received 1 mg/kg body weight per day acitretin. From the third week, patients received concomitant PUVA therapy. The initial UVA doses were established by skin typing (1–1.5 J/cm^2). The dosage increments were applied every other week with a 20% Acitretin, and PUVA treatment was applied for 12 weeks. Then, maintenance PUVA treatment was given twice or once per week for 3 months. The sign of improvement was defined as loss of induration and erythema in the lesions, which was noted before the treatment. Follow-up has varied from 4 to 16 months after tapering the treatment.

Except for cutaneo-mucosal side-effects (all cases), joint and muscle pain (cases 2 and 4) and mild elevation of triglyceride (case 2), other side-effects were not recorded. Nausea was recorded as a complaint in the first 2 weeks of the treatment in the case 4 due to 8-methoxypsoralen. In case 2, a bulla occurred in an indurated patch on the right lumbar area on the fifth week of treatment. This

Table 1 Clinical findings and response to acitretin-PUVA treatment in the patients

Case no.	Age (year)/ weight (kg)	Sex/skin type	Clinical findings	Disease duration	Symptoms	MSS before treatment	MSS after treatment	No. of PUVA exposures	Total UVA dose (J/cm^2)
1	31/62	F/III	Atrophic patches, trunk and limbs; erythematous patches, lower extremities; all indurated and some them hyper or hipopigmented	11 years	Pruritus, tightness of skin and pigment alteration	17	3	72	405.5
2	57/65	F/III	Atrophic and erythematous patches, trunk and lower extremities; some of them indurated		Pruritus	10	2	57	242
3	45/47	F/IV	Hyperpigmented, erythematous and indurated patches, trunk and limbs	10 months	Cosmetic disturbance and tightness of skin	12	3	62	284.4
4	56/60	F/III	Atrophic, erythematous and indurated patches, trunk and limbs; some of them hyperpigmented	4 months	Tightness of skin and pruritus	24	5	70	367

Abbreviation: F, female.

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