Case 24

A 58-year-old woman from Trang.

Chief complaint: Violaceous plaques on both medial upper and lower extremities for 2 weeks.

Present illness: The patient had recognized asymptomatic violaceous plaques on both inner arms and thighs for 2 weeks. She denied history of arthritis or other systemic symptoms.

Past history:

Autoimmune thyroiditis
Autoimmune hepatitis with cirrhosis
Systemic lupus erythematosus

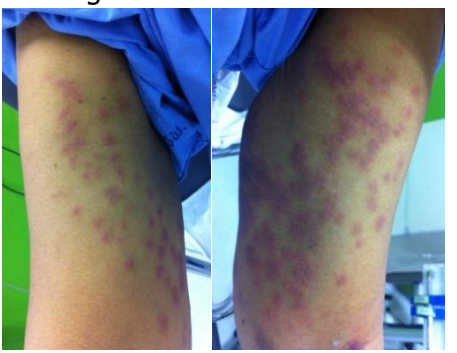
Personal history: She denied history of alcohol consumption or use of herbal medicine.

Physical examination:

GA: A middle-aged woman, mild pale, marked jaundice.
HEENT: Mild pale conjunctiva, icteric sclera, no oral ulcer, thyroid gland 30 g, not tender.
Heart & lungs: Within normal limit.
GI: Distend, no superficial vein dilated, no palmar erythema, no spider nevi, soft, liver 1 FB BRCM, liver span 12 cm, spleen can't be palpated, ascites positive.
Ext: No pitting edema.
Neuro: Flapping tremor.

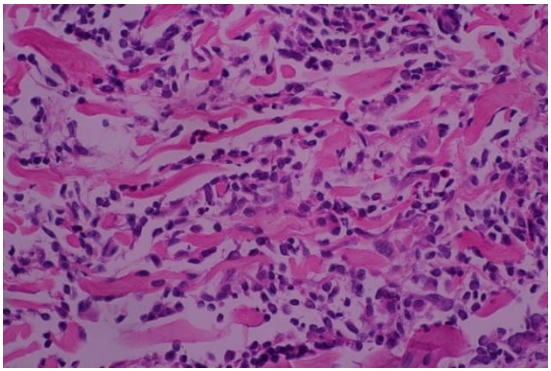
Skin examination:

Multiple non-blanchable violaceous papules and plaques on both inner arms and thighs.



Histopathology: (S13-08760, left arm)

Moderately dense interstitial infiltration of lymphocytes, histiocytes and some neutrophils within superficial and deep dermis. Alcian blue failed to reveal deposition of mucin. Histiocytes stained positive for CD68.



Investigation:

- CBC WBC 6,210 cells/mm^3 (N 74%, L 18%, M 8%), Hct 27.3%, Plt 73,000 cells/mm^3
- ESR 41 mm/hr
- Direct Coombs' test: positive
- 24 hr urine protein 600 mg/d
- AST 385 U/L (15-37 U/L)
- ALT 231 U/L (30-65 U/L)
- Alb 12.4 g/L (34-50 g/L)
- TB 18.2 mg/dL (0-1 mg/dL)
- DB 12.4 mg/dL (0-0.3 mg/dL)
- ASMA: positive titer > 1:1,600
- ANA: positive nucleolar titer $\geq$ 1:1,280
  positive homogeneous titer $\geq$ 1:1,280
- Anti dsDNA 1+
- Anti-Ro antibody 1+
- Anti-La antibody negative
- C3 243 ug/ml (900-1800 ug/ml)

- C4 116 ug/ml (100-400 ug/ml)
- CH50 25% (100%)
- IgG 41.5 mg/mL (7-16 mg/mL)
- Anti-TG >4000 IU/ml (0-115 IU/ml)
- Anti-TPO >600 IU/ml (0-34 IU/ml)
- Free T3 <1.00 pg/ml (1.71-3.71 pg/ml)
- Free T4 1.06 ng/dL (0.70-1.48 ng/dL)
- TSH 0.864 uIU/mL (0.35-4.94 uIU/mL)
- HBsAg: negative
- Anti HCV: negative
- Anti HAV IgM: negative
- Anti HIV: negative
- CT whole abdomen: Cirrhosis with portal hypertension

Diagnosis:

Interstitial granulomatous dermatitis
Autoimmune hepatitis with cirrhosis
Autoimmune thyroiditis
Systemic lupus erythematosus

Treatment: Prednisolone(5) 10x1
Eltroxin(0.05) 1x1
Ursodeoxycholic acid(250) 2x2
$CaCO_3$(1250) 1x1
Vitamin D(20,000) 2/week
Omeprazole(20) 1x1

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Discussion

Interstitial granulomatous dermatitis (IGD) is an uncommon disease, with characteristic histopathological features but variable

clinical expression. It usually occurs in women with rheumatoid arthritis, seronegative arthritis or polyarthralgias and is often associated with autoimmune thyroiditis. The clinical signs in the skin usually consist of asymptomatic or slightly burning, multiple erythematous plaques, often with an annular configuration or linear cords (rope sign), that favor the lateral trunk, axillae, buttocks and medial thighs in a bilateral and symmetric distribution. There have been reports of pruritic or tender skin lesions.[1]

The clinical diagnostic considerations of IGD include granuloma annulare, the inflammatory stage of morphea, urticarial vasculitis, eosinophilic cellulitis, and erythema chronicum migrans.

IGD with arthritis (IGDA) was first described in by Ackerman et al. in 1993.[2] The initial clinical descriptions of IGDA recounted subcutaneous linear cords that were thought to be pathognomonic (rope sign). After the original description, different clinical lesions have been described including papules and plaques which were reported more common than linear cords.[3] The arthritis accompanying these skin lesions may appear before, during or many years after the onset of the cutaneous lesions.[2] The joint involvement is usually symmetrical, and mainly affects the small joints of hands, wrists, elbows, and shoulders. The arthritis usually follows a relatively benign course, and is generally nondeforming and nonerosive.[4] Most patients with IGDA are reported to have abnormal serologic findings, such as rheumatoid factor positivity, presence of autoantibodies, and elevated erythrocyte sedimentation rate.

Histopathologic pattern of IGD features rosettes of palisading histiocytes surrounding tiny foci of degenerated collagen within a dense, bottom-heavy dermal interstitial infiltrate that contains variable numbers of neutrophils and eosinophils. There is no evidence of vasculitis, and dermal mucin is usually absent. The histologic findings could also be confused with leukemia cutis or large cell lymphoma, as in our patient because some histiocytes

exhibited large and pleomorphic forms,[5] but history and physical examination were against these diagnoses. The presence of histiocyte was confirmed by immunostaining.

The cause of IGD is still unknown. However, it has been described in association with several autoimmune disorders, including rheumatoid arthritis, systemic lupus erythematosus (SLE), primary antiphospholipid syndrome, autoimmune thyroiditis, and autoimmune hepatitis.[1,6-9] The lack of randomized clinical studies has prevented an optimal treatment for IGD to be determined. Treatment of the underlying disease can also lead to resolution of existing lesions and prevent recurrences.

In our patient was diagnosed IGD with autoimmune thyroiditis, fulminant hepatic failure from autoimmune hepatitis and SLE. She was treated with N-acetylcysteine and prednisolone 50 mg/d. Her consciousness improved as well as the skin lesions which flattened and left brownish hyperpigmentation in a few days. There was no recurrence of the skin lesions at one-month follow-up. Unfortunately she died a month later after the last follow-up due to *Vibrio cholerae* and *Acinetobacter baumannii* sepsis.

To the best of our knowledge, IGD in a patient who has autoimmune thyroiditis, autoimmune hepatitis and SLE has never been reported before. These associations lend support to the concept that IGD is a manifestation of an autoimmune etiology and patients should be screened for rheumatic and autoimmune diseases.

References

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