CASE NO. 4

Patient: A 67–year-old Thai male from Ayudhaya

Chief complaint: A gradually cutaneous eruption in 1 week

Present illness: He presented with fever for 1 month, and was admitted in a community hospital where diagnosed him as a viral infection. However, he was administered with ceftriaxone and doxycycline for 10 days. He received hydroxychloroquine and orphenadrine as home medication. With progressively altered consciousness and gradual generalized skin lesions eruption in a week, he was then admitted in Ramathibodi hospital.

Past history: He had COPD for more than 10 years and discoid lupus erythematosus (DLE) for 2 years. With negative ANA, the patient lost to follow-up since then.

Family history: unremarkable

Drug hypersensitivity: none

Physical examination: A drowsy Thai male
BT 38.3 C, BP 151/93 mmHg, PR 117/min, RR 18/min, SpO2 98% at room temperature
Not pale, no jaundice, dry lips, no palpable lymphadenopathy
CVS, RS, abdomen: WNL
NE: spontaneous eye opening, partially follow to command, full EOM, no facial palsy, motor at least grade 3

Skin examination:
On admission, well-defined hypopigmented patches with atrophy and telangiectasia on face, scalp and extremites and generalized, erythematous coalescent papules and plaques with some ulcerations and hemorrhagic crusts on trunk, extremities, palms and soles were described. No mucosal involvement was found.

Five days after admission, the lesions developed into widespread dusky erythema with bullae. There were extensive erosions on previous lesions involving more than 70% of body surface area. Mucosal lesions were still absent. Nikolsky's sign was positive.

(Fig. 4.1, 4.2)

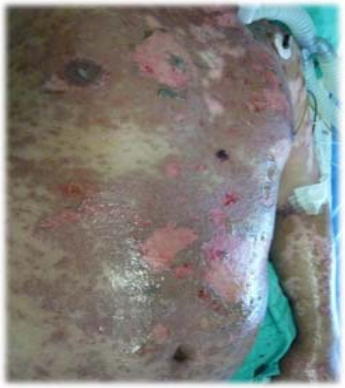

Fig. 4.1 Pretreatment

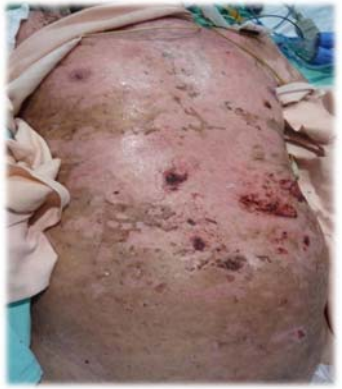

Fig. 4.2 Posttreatment

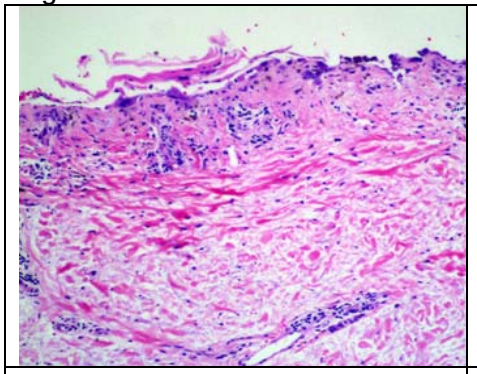

Fig. 4.3

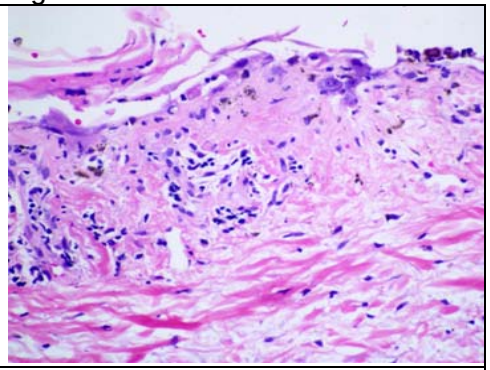

Fig. 4.4

Histopathology (S08-21340) (Fig. 4.3, 4.4)

- Epidermal atrophy, necrotic keratinocytes vacuolar alterations of basal cell layer with subepidermal separation.

- Sparse superficial perivascular infiltrate of lymphocytes and some melanophages in the upper dermis.

Direct immunofluorescene: positive C3 granular pattern at DEJ; compatible with LE (Fig. 4.5)

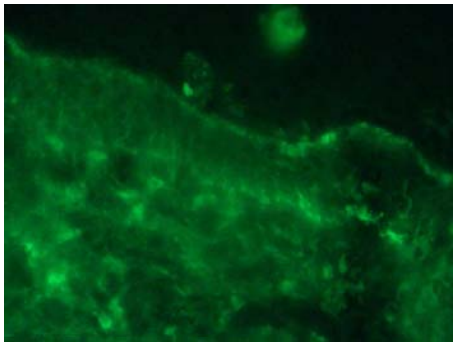

Fig. 4.5

Investigation:

CBC: WBC 3,500 /μl, N 31%, L 65% (absolute lymphocyte 2275), Eo 1%,
Hct 30.6%, MCV 57, platelets 268,000/μl, ESR 43
Blood chemistry: WNL
Urine analysis: WBC 0-1, no RBC cast
Would G/S: few PMN, moderate GPC, few GNB
CXR: no infiltration
ANA: positive 1:80, nucleolar pattern
Anti dsDNA: positive 40 IU/ml
Anti Ro: negative, Anti La: positive
Lupus anticoagulant: positive
C3: 821↓ , C4: 109 (N), CH50: 75%
Septic work up: no organism found
MRI brain: evidence of CNS vasculitis

Diagnosis: Toxic epidermal necrolysis-like acute lupus erythematosus

Treatment:

- IVIG
- Intravenous ATB cover MRSA: meropenam, vancomycin
- Supportive wound care: hydrocolloid dressing (Urgotul SSD™)

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Discussion:

Toxic epidermal necrolysis-like acute lupus erythematosus (TEN-like ACLE) is a specific vesiculobullous lesion in lupus erythematosus which was firstly proposed by Sontheimer in 1997[1]. Nevertheless, Mandelcorn and Neil suggested TEN feature as a novel manifestation of lupus in 2003[2]. The characteristic of LE-specific vesiculobullous lesions is a dramatic extension of the interface dermatitis due to a result of aggressive inflammatory epidermal basal layer damage. On the other hand, LE-non specific vesiculobullous skin disease does not present a distinctively interface dermatitis but rather demonstrate their own characteristic histopathologic patterns including DH-like, EBA-like and BP-like vesiculobullous LE.

Also, TEN-like LE is classified in the spectrum of the acute syndrome of apoptotic pan-epidermolysis (ASAP)[3], a clinical syndrome that is characterized by life-threatening sheet-like epidermal separation due to acutely aggressive inflammatory basal layer damage with extensive interface dermatitis. TEN-like injury can be found in numerous settings other than drug hypersensitivity reactions. TEN-like acute graft versus host disease, TEN-like pseudoporphyria and TEN-like ACLE are also differentiated from TEN.

All four conditions share features of full-thickness, sheet-like, apoptotic, epidermal cleavage with or without preceding acute erythema, vesiculobullous change. History of drug hypersensitivity,

marked mucosal involvement and eosinophilia are distinctive characters in TEN. Allostimulation of donor lymphocytes, predominatedly perifollicular distribution and palms and soles involvement are commonly presented in TEN-like acute GVHD. Although, both TEN-like pseudoporphyria and TEN-like ACLE are mainly photodistribution, history of NSAIDS or other photosensitizing drugs plus UV radiation, often in setting of hemodialysis with minimal multiorgan or mucosal involvement and normal porphyrins are necessary to diagnose TEN-like pseudoporphyria. In TEN-like ACLE, mucous membrane, palms and soles are not common; however, UV light and SLE predisposition are frequently noted. Not only are skin lesions on photodistributed area demonstrated, multiple organs toxicities and the risk of hypercoagulable state are revealed. Positive ANA, anti-Ro/La and anti-dsDNA are often shown. Therefore, prior illness, drug administration, sun exposure, skin distribution, mucosal and other organs involvement are the major features to differentiate the diseases in ASAP group.

To date, several treatments have been used, including prednisolone[2], methylprednisolone[4], IVIG[2, 3] and plasmaphoresis[5]. However, the outcomes were varied from remission to termination[3].

In our patient, TEN-like ACLE with CNS vasculitis was diagnosed based on histological examination and MRI findings. A course of IVIG (2g/kg), supportive wound care with hydrocolloid dressings and empirical intravenous antibiotics were prescribed. Modest decrease of epidermal detachment with reepithelialization was observed within a week after the course of IVIG. Unfortunately, the patient was expired because of severe septicemia.

References

1. Sontheimer RD. The lexicon of cutaneous lupus erythematosus--a review and personal perspective on the nomenclature and classification of the cutaneous manifestations of lupus erythematosus. Lupus 1997;6:84-95.
2. Mandelcorn R , Shear NH. Lupus-associated toxic epidermal necrolysis: a novel manifestation of lupus? J Am Acad Dermatol 2003;48:525-9.
3. Ting W, Stone MS, Racila D, Scofield RH , Sontheimer RD. Toxic epidermal necrolysis-like acute cutaneous lupus erythematosus and the spectrum of the acute syndrome of apoptotic pan-epidermolysis (ASAP): a case report, concept review and proposal for new classification of lupus erythematosus vesiculobullous skin lesions. Lupus 2004;13:941-50.
4. Paradela S, Martinez-Gomez W, Fernandez-Jorge B, Castineiras I, Yebra-Pimentel T, Llinares P et al. Toxic epidermal necrolysis-like acute cutaneous lupus erythematosus. Lupus 2007;16:741-5.
5. Simsek I, Cinar M, Erdem H, Pay S, Meric C , Dinc A. Efficacy of plasmapheresis in the treatment of refractory toxic epidermal necrolysis-like acute cutaneous lupus erythematosus. Lupus 2008;17:605-6.