DRUG INDUCED TOXIC EPIDERMAL NECROLYSIS

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SYNOPSIS

This is a report of 3 cases of drug induced toxic epidermal necrolysis, a dermatological emergency. The treatment and course of the disease is described. Patients are best managed in a burns unit to collaboration with a dermatologist. One of the three patients died in spite of therapy.

INTRODUCTION

Toxic epidermal necrolysis (TEN), first described in 1956 by Lyell (1) is a clinical syndrome characterised by a blistering eruption of the skin resembling scalding of the skin. These patients are seen usually by physicians and dermatologists and constitutes a dermatologic emergency.

MATERIALS AND METHODS

3 cases of TEN were seen over a period of a month at the Burns centre, Department of Plastic Surgery, Singapore General Hospital. All cases had been admitted to a general medical ward before transfer to the Burns centre.

Case 1:

A 31 year old female Chinese with complaints of headache, backache was treated by her general practitioner with phenylbutazone with relief. There was recurrence of symptoms 1 week later and a repeated course was given. Several hours after taking the phenylbutazone the patient developed a generalized rash and a blistering eruption. She also passed greenish watery stools (10–14 ×) a day. On admission she was noted to have a blistering eruption with the skin peeling off in scrolls (fig 1). Laboratory investigations showed: s. bilirubin 4.8mg/dl, SAP 338 u/l, SGPT 528 u/l, SGOT 332 u/l. On the 5th hospital day she developed a spiking fever and septicaemia. She died in spite of large doses of antibiotics, steroid therapy, transfusions and other supportive measures on the 10th hospital day.

Case 2:

A 20 year old female Chinese with history of fainting spells was given dilantin therapy. 3 weeks later she complained of neck cramps and was noted to have cervical lymphadenopathy. She was started on a course of bactrim. The next day she was noted to have mouth ulcers and blistering of the skin. A diagnosis of TEN was made by her dermatologist and she was admitted and transferred immediately to the Burns centre. The blood profile was normal and she recovered uneventfully in hospital.

Case 3:

A 65 year old Chinese female with history of hypertension, chronic renal impairment developed symptoms of gouty arthritis and was put on allopurinol. A few days later she developed a generalised itchy rash which underwent blistering. She was seen by her physician and referred to the Burns centre for admission and treatment.

MANAGEMENT

In all cases the patients were nursed in isolation in high dependency rooms. Fluid and electrolyte therapy was instituted as estimated from losses calculated from the raw wound surface. Oral feeds were encouraged if mouth ulcers were not too severe. The blistered skin was left intact wherever possible and the patient nursed exposed. Dressing of the wound was done if the skin had actually come off or to facilitate handling of the patient. Dressing was done with tulle gras and gauze with cotton wool packing as for a burns dressing. Relief of pain was in the form of morphine or pethidine and was given as necessary to keep the patient comfortable.

Antibiotic therapy was erythromycin but where specific bacterial culture sensitivity was available, it would be changed. Steroid therapy was given on admission and taken off as soon as the patients showed improvement usually within a few days. Daily eye toilet was done to prevent corneal ulceration.

DISCUSSION

The diagnosis of toxic epidermal necrolysis is essentially a clinical one. It is characterised by extensive blistering of the skin hence the term "Scalded skin syndrome".

Etiology:

The cause of TEN has been described by Lyell as falling into 4 groups, viz. TEN due to Staphylococcus infection: TEN due to drugs: TEN as an incident in other disease and TEN of unknown origin (2). We are confining ourselves to cases of TEN due to drugs as this has medicolegal implications.

The most commonly associated drugs are sulphonamides, phenylbutazone (and other pyrazolones), allopurinol, barbiturates, antiepileptics and tetracyclines. In our 3 cases, a history of drug intake of one of the above is present. Environmental toxins such as petroleum distillates, toxic fumigants have also been implicated.

It must be noted that even after the agent has been removed, the disease continues along its course.

Diagnosis:

Essentially a clinical one, patients may give a drug history and one should be looked for. Symptoms are non specific until the blistering eruption occurs. Mucosal surfaces are also affected and the lips appear black from the blistered and sometimes hemorrhagic skin. Usually the scalp, palms and soles are spared.

Natural course of disease: In uncomplicated cases, the raw areas take 10 to 28 days to heal but should infection occur the patient is likely to develop septicaemia and perish (3).

Treatment:

TEN is best managed in a Burns unit (4). This is because the problems of management of a patient with large areas of skin loss are best dealt with as in a severe burn. A dermatologist should work in close association with the burns team. Important points to note are:

1 Prevention of wound infection
2 Correction of fluid and electrolyte losses
3 Not to deblister or remove the skin
4 Adequate care for the eyes
5 Good psychological support
6 Steroid therapy to be given early and taken off as soon as possible
7 Antibiotic therapy if wound infection suspected.

Prognosis:

The mortality rate varies from 20% to 45%. Death is due to septicaemia or worsening of the attack. Healing of the skin would normally leave little scarring though hypertrophic scars have been reported (5). There does not seem to be any good prognosticating signs or investigations though evidence of disseminated intravascular coagulation (6) and depression of plasma prealbumin (1) would suggest a poorer prognosis.

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