

CASE REPORTS

Ciprofloxacin-induced toxic epidermal necrolysis (TEN) in a nonagerian: a case report

BHASKAR MANDAL, MICHAEL STEWARD, SUDHIR SINGH, HYWEL JONES

Geratology, Radcliffe Infirmary, Oxford OX2 6HE, UK

Address correspondence to: B. Mandal. Fax: (+44) 1865 353773. Email: bhaskarmandal68@hotmail.com

Abstract

A 93-year-old lady developed extensive skin lesions following treatment with ciprofloxacin for urinary tract infection. Skin biopsy confirmed toxic epidermal necrolysis. She died within 48 hours of onset of her skin signs in spite of active management. Toxic epidermal necrolysis is a rare but serious side-effect of ciprofloxacin.

Keywords: *ciprofloxacin, toxic epidermal necrolysis, elderly*

Case report

A 93-year-old lady was admitted to an acute medical admission unit with evidence of urinary tract infection and septicaemia. She was also known to be allergic to penicillin, suffered with ischaemic heart disease and with hypertension. Her regular medication included aspirin, ramipril and isosorbide dinitrate. She was treated in the hospital with oral ciprofloxacin for her urinary tract infection. However, within 72 hours of commencing ciprofloxacin she became acutely unwell, developing bloody, crusted erosion of the peroral and nasal mucosa with large areas of superficially denuded skin over the face, arms, thighs and buttocks. She also developed flaccid blisters over the neck, back and upper limbs along with erythema over the abdomen. Sixty percent of her skin was involved within 24 hours of onset of cutaneous signs. She was febrile, tachycardic and delirious. A clinical diagnosis of toxic epidermal necrolysis (TEN) was made.

A skin biopsy was taken and the patient was transferred to the regional burns unit. Her management included pain control with opioid analgesia, management of nutrition and fluid input and supportive management. There was no evidence of sepsis and the patient was not given prophylactic antibiotics. Over the next 24 hours she remained haemodynamically unstable and developed multi-organ failure. She died within 48 hours of onset of cutaneous signs. The skin biopsy demonstrated a necrotic epidermis, split at the base from the dermis. The dermis showed perivascular mononuclear infiltrate and occasional macrophages containing brown pigments. This histological picture and clinical findings were consistent with a diagnosis of TEN.

Discussion

TEN or Lyll's syndrome is an idiosyncratic, severe systemic disease characterised by prodromal symptoms followed by a dramatic cutaneous sloughing of up to 100% of the body surface area. Mortality varies from 25% to 75% and increases with age. Average incidence is around 1/million persons in the western population with three-quarters of cases of TEN reported to be drug associated. However, other associations have been documented including immunisation, viral infection, graft versus host disease and connective tissue disorders. The pathogenesis of TEN is unclear. The histological findings of full-thickness epidermal necrosis imply that the epidermis is directly or indirectly the target of the disease process and most likely a T-cell mediated immune reaction.

Management of TEN is mainly supportive and the survival rate improves when the patient is managed in a burns unit or in the intensive therapeutic unit [1–3]. The role of systemic steroids is controversial and there is no evidence to suggest that it is beneficial in TEN. Prophylactic antibiotics and plasmapheresis are being used with variable results [1, 4].

In this case, the patient was placed on ciprofloxacin 3 days prior to the onset of cutaneous signs and had not taken any other medications, including over-the-counter NSAIDs, known to cause TEN. The time course strongly suggests ciprofloxacin as the responsible agent [5]. Only a handful of cases have been reported in the medical literature, where ciprofloxacin has been implicated. The previous cases reported were between the ages of 31 years and 72 years [3]. To our knowledge this is the first reported case of ciprofloxacin-induced TEN in a nonagerian. This well documented case adds to the evidence that TEN is a rare but serious side-effect of ciprofloxacin and the outcome may be fatal.

Key points

- Ciprofloxacin is a rare cause of toxic epidermal necrolysis (TEN).
 - Management is mainly supportive.
 - Patients are best managed in a burns unit.
 - Prognosis deteriorates with increasing age.
-

2. Moshfeghi M, Mandler HD. Ciprofloxacin induced toxic epidermal necrolysis. *Ann Pharmacotherapy* 1993; 27: 1467–9.
3. Livasy CA, Kaplan AM. Ciprofloxacin induced toxic epidermal necrolysis: a case report. *Dermatology* 1997; 195: 173–5.
4. Sakellarios G, Koukoudis P, Karpouzas J. Plasma exchange treatment in drug induced toxic epidermal necrolysis (TEN). *Int J Artificial Organ* 1991; 14: 634–8.
5. Tham TCK, Allen G, Hayes D. Possible association between toxic epidermal necrolysis and ciprofloxacin (letter). *Lancet* 1991; 338: 522.

References

1. Parson JM. Toxic epidermal necrolysis. *Int J Dermatol* 1992; 31: 749–67.

Received 4 October 2003; accepted in revised form 15 December 2003

Age and Ageing 2004; 33: 406–407
DOI: 10.1093/ageing/afh103

Age and Ageing Vol. 33 No. 4 © British Geriatrics Society 2004; all rights reserved
Published electronically 13 April 2004

BIPP madness; an iatrogenic cause of acute confusion*

LISA YOUNGMAN¹, SUSIE HARRIS²

¹Springfield Unit, University Hospital North Staffordshire, City General Site, Stoke-on-Trent T4 6QG, UK

²Royal Devon and Exeter NHS Trust Hospital, Barrack Road, Exeter, Devon EX2 5DW, UK

Address correspondence to: L. Youngman. Fax: (+44) 1782 552597. Email: lisayoungman@yahoo.com

Abstract

An 81-year-old man, admitted under the Ear, Nose and Throat Team with persistent epistaxis, developed an acute confusional state. He was previously physically independent and mentally competent. Immediate investigations did not reveal a cause for his deterioration. He eventually made a full recovery and returned home. Subsequently, his serum bismuth level was noted to be within the toxic range and was felt to have been the cause of his confusional state.

Keywords: *acute confusion, bismuth toxicity, elderly*

Case report

The Ear, Nose and Throat (ENT) Team referred an 81-year-old man with acute confusion. He had been admitted 10 days previously with epistaxis. Haemostasis had been difficult to achieve and after 4 days of nasal packing, he had required surgery and a 2 unit blood transfusion. There were no complications during or immediately after surgery. Two days

post-surgery his condition deteriorated. He became acutely confused. His gait became unsteady. He developed dysphagia necessitating naso-gastric intubation for nutrition and hydration. He had become doubly incontinent.

Prior to admission this gentleman had been mentally competent and physically independent. He had a past history of chronic obstructive pulmonary disease, but did not require regular medication. He had never smoked and drank less than five units of alcohol per week.

On examination, he was conscious with a Glasgow Coma Score of 14/15. His speech was dysphonic. Abbreviated Mental Test (AMT) score was 1/10. He was afebrile

*Published in abstract form in *Journal of Nutrition and Ageing*, Volume 5, special issue 2001. (Abstracts of Communications: Congress of European Union Geriatrics Society, Paris August 29–31, 2001).