Necrotizing fasciitis following varicella – report of two cases

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Introduction

Necrotizing fasciitis is a serious toxin mediated infection of the skin and subcutis, caused by a number of different organisms.

In most of the cases *Streptococcus pyogenes* is often incriminated. Other organisms include pseudomonas, gram negative bacilli, aerobic and anaerobic species. Necrotizing fasciitis can occur in debilitated, diabetic or neutropenic patients.

It is also known to follow varicella infection in otherwise healthy persons.

Case 1

A previously healthy 3½ year old baby girl presented with fever, and skin ulcers on the 6th day following Varicella. On examination she was ill and febrile. There were two punched out large ulcers on the abdomen and left groin with necrotic bases. "Dish wash water fluid" was draining out from the edges.

Laboratory investigation revealed;
WBC 18000/mm^3,
Neutrophil 84%, ESR 132 mm/h,
CRP 104.9,

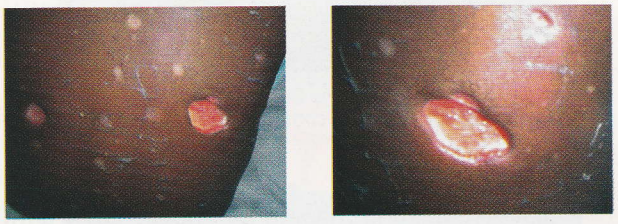
Serum proteins, blood urea, serum electrolytes, blood glucose levels were within normal limits.

Blood culture was negative.

Smear from the ulcers revealed gram positive cocci arranged in a chain.

Culture grew *Streptococcus pyogenes*.

Patient was treated with parentral Clindamycin and C. Penicillin for 21 days. Surgical "debridement" of the ulcers was performed. Secondary suturing was done later to accelerate the healing process and to achieve minimal scarring.



Punched out ulcers in necrotising fasciitis (Case 1).

Case 2

5½ year old boy presented with new blisters, skin ulcers and fever on the 9th day following varicella. He was otherwise a healthy child.

Examination revealed few punched out ulcers of varying size with necrotic base over the abdomen and both thighs. The surrounding tissues showed minimal inflammation. He was febrile and looked ill.

Direct smear and culture from the ulcer revealed;
E.coli
WBC 17,600/mm^3
Neutrophil 81%
ESR 89 mm /h
CRP 69.9
Blood culture negative.

(Case 2)

Other investigation including BU, S. electrolytes, blood glucose and S. protein were within normal limits.

The child was treated with Imipenam and Clindamycin for two weeks. Lesions healed with minimal scarring.

Discussion

Necrotizing fasciitis is known to occur in varicella. Both our patients were otherwise healthy and showed evidence of a new infection around 6th and 10th day. This was characterized by fever and development of blisters which rapidly progressed to necrotic ulcers. Both had systemic toxicity as evidenced by fever, lethargy and looked ill.

The diagnosis was confirmed microbiologically by demonstrating *Streptococcus pyogenes* in one and *E.coli* in the other.

Necrotizing fasciitis is a potentially fatal toxin mediated illness. Originally believed to be caused by *Streptococcus pyogenes*. It is now known to be caused by other organisms including *E.coli*, mixed anaerobes, gram negative aerobic bacilli.

The illness may occur in otherwise healthy and early recognition is vital to prevent the associated morbidity and mortality.

The treatment consist of early surgical debridement and early appropriate antibiotic therapy based on microbiological evidence whenever possible.

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