

Toxic shock syndrome after nasal surgery

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SUMMARY

Toxic syndrome was described as a complication of nasal surgery in 1982 (Thomas et al.) and eight cases have since been reported. To our knowledge this is the first case described outwith the United States. The diagnosis should be considered in any case of unexplained collapse following nasal surgery.

CASE REPORT

A 39 year old woman developed nausea, diarrhoea and malaise following routine antroscopy and turbinectomy for chronic rhinosinusitis. On the next day, a few hours after removal of nasal packing, she collapsed suddenly with tachycardia (120/minute) and profound hypotension (60/0 mm Hg). Despite administration of five litres of intravenous fluid, the hypotension persisted over several hours and the patient developed pyrexia (38.4°C), oliguria and erythroderma. Haematological investigation showed evidence of disseminated intravascular coagulation with prolonged prothrombin and partial thromboplastin times, thrombocytopenia and a reduced haemoglobin, and a mild leucocytosis. Serum bilirubin and urea were elevated and calcium reduced. Blood cultures were negative but a nasal swab grew *Staph. aureus*. A diagnosis of toxic shock syndrome was made. She was treated with parenteral antibiotics and made a rapid recovery, noticing marked desquamation particularly of the hands and feet two weeks later. Subsequent phage typing of the staphylococcus confirmed a strain known to be associated with non-menstrual cases of toxic shock syndrome.

This case demonstrates the major criteria for a diagnosis of toxic shock syndrome - pyrexia, profound hypotension, erythroderma and multi-system involvement caused by blood-borne spread of toxins from penicillin-resistant *Staph. aureus* (Hull et al., 1983). Hypocalcaemia is present in 50% of cases and disseminated intravascular coagulation is a rare though recognised feature.

Non-menstrual cases comprise 13% of those in the U.S.A. and are associated with different staphylococcal strains from the classical tampon-associated cases. In the few reports of toxic shock following nasal procedures (two with fatal outcome), it has been suggested that intranasal packs may be analogous to tampon use in the aetiology (Tag et al., 1982; Barbour et al., 1984). Over 40% of the population have nasal colonisation by *Staph. aureus*, however, and up to 98% of patients have packs inserted following nasal surgery (Jacobson and Kasworm,

1986). The rarity of the condition is, therefore, unexplained but it is probable that some cases are misdiagnosed, particularly the more mild forms (Hirsch *et al.*, 1984). The rhinologist should be aware of the existence of this rare condition which usually presents within 24 hours of operation. Where nasal packing is in situ, it should be removed and any focus of sinonasal infection eliminated. Prompt treatment with β lactamase resistant antibiotics, fluid replacement and organ support is essential to minimise morbidity and mortality.

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