GYNAECOLOGY CASE REPORTS

Toxic shock syndrome: A silent killer

M. NAIR, C. ALABI & P. I. HIRSCH

Department of Obstetrics and Gynaecology, Wythenshawe Hospital, Manchester, UK

Case study
We present a case of a 27-year-old para 2 + 0 who had a normal delivery 2 years previously. She had a previous cone biopsy for CIN3 and was receiving annual smears. She was referred by her GP to our A&E department with a 24 h history of generally feeling unwell, with diarrhoea, vomiting and lower abdominal pain. Her temperature was 38 °C; she was hypotensive (blood pressure 72/38 mmHg), with a respiratory rate of 15. Systemic examination did not reveal any significant findings except mild suprapubic tenderness. A provisional diagnosis of septicaemia was made, but the focus of infection was unknown. Investigations performed included FBC, coagulation screen, ECG, U&E, CRP, showed raised inflammatory markers (WCC 22, CRP 249); clotting profile was deranged (PT 17.9, APTT 42.9). There was hyponatraemia, hyperkalemia, elevated uric acid and creatinine level. Serum βHCG, ECG and blood glucose results were normal. In view of the acute presentation, she was transferred to our ICU.

She was started on intravenous Cefuroxime, gentamycin and clindamycin and aggressive fluid resuscitation. A gynaecological opinion was sought to review her tender and erythematous vulva, which was noted during the process of catheterisation.

Vaginal examination revealed a tampon, which was sent for culture and sensitivity. She recollected the tampon to be in situ for 48 h. The tampon and the swabs grew Staphylococcus aureus. A diagnosis of toxic shock syndrome (TSS) was made. Flucloxacillin was added to her treatment regime and she made an adequate recovery within 24 h. On follow-up 2 weeks after discharge, she seemed well with no obvious sequelae.

Discussion
Toxic shock syndrome had significant publicity in the late 1970s and early 1980s because of its association with the use of tampons. The incidence in the UK is described as about 18 reported cases a year, with a fatality of between 2.5–5%, but it is believed that incidence is under-reported (Reingold 1991). The reduction in the incidence rate has been associated with the educational campaign not only by health officials in the USA and UK, but also by manufacturing companies (Omar and Aggarwal 1998).

It is a condition initially associated with Staphylococcus aureus but has also been linked to Grp.A haemolytic streptococcus infection. It can be classified as menstrual and non-menstrual TSS. The case we described is a typical presentation of menstrual TSS. It is a multi-system condition due to colonisation and eventually release of exotoxins into the body by the bacteria and this eventually causes suppression of the host immune system and subsequently multi-end organ failures.

The condition usually presents with acute illness such as high fever, nausea, vomiting, abdominal pain, severe muscle pain and tenderness, headaches, hypotension and the characteristic macular erythrodema rash developing over 48 h. Other symptoms and signs are associated with multi-system failure.

Management
We believe the most important aspect of diagnosis is a high index of suspicion (Issa and Thompson 2001). Good history taking, physical examination including vaginal examination is important looking for retained tampons, contraceptive devices such as cervical cap and diaphragm, and a recent surgical termination of pregnancy is also a risk factor.

Once diagnosed, aggressive fluid resuscitation is necessary to maintain cardiac filling pressure, preventing multiple end organ failures. Broad-spectrum antibiotics were used in our case; penicillin has always been widely used for treating TSS. Evidence suggests clindamycin in combination with cell wall active agents such as vancomycin or semi-synthetic penicillins is more efficacious. Intensive care monitoring is indicated, as well as regular checking of FBC, clotting profile, urea and electrolytes as demonstrated in our case and in refractory cases administration of pooled human immunoglobulin may be necessary.

Conclusion
Though tampons were originally blamed for TSS, this is a condition that can also be non-menstrual and associated with Grp.A streptococcus infections. It is a lethal condition if not diagnosed early and although the incidence has reduced over the years, it is possibly under reported. Continuous education of users of tampons is important to both patient and medical staff.

References


Correspondence: M. Nair, 32 Fordbank Road, Didsbury, Manchester M20 2TH, UK. E-mail: manju_arun@hotmail.com

DOI: 10.1080/01443610600994734