should be taken that the normal paediatric blood volume is 70 - 80 ml/kg and thus blood loss may often be underestimated. Care should be taken to avoid hypotension in patients who have sustained blunt trauma with associated head injury.\(^1\)

Venous access remains a challenge in the paediatric population. After 3 unsuccessful attempts at percutaneous line placements an intraosseous tibial, femoral or central venous line should be placed immediately. These techniques have largely replaced the use of the saphenous cutdown, which should now be seen as a technique of last resort.\(^14\)

**Temperature management**

Temperature management is often omitted during paediatric trauma management.\(^15\) The relatively large body surface area of children, ineffective vasoconstriction and cold fluid infusion may combine to rapidly cause hypothermia. Care should be taken to avoid unnecessary exposure, to keep the patient dry and to provide a warm environment during resuscitation. Forced air warmers and in-line fluid warmers are essential in trauma patient management. References available at www.cmej.org.za

**Duration of antimicrobial therapy**

MARTHINUS SENEKAL, MB ChB, MMed Micro Path
Clinical Microbiologist, Pathcare, Goodwood

Correspondence to: Marthinus Senekal (senekal@pathcare.co.za)

The appropriate duration of therapy is often open to question. Extended antimicrobial therapy is associated with selection of resistant organisms, adverse events, expense and poor patient compliance. Evidence suggests that a short duration of treatment is as effective as a longer course of treatment for certain common community-acquired infections, such as acute otitis media, acute bacterial sinusitis, infectious exacerbations of chronic bronchitis, community-acquired pneumonia and acute pyelonephritis.\(^1\)

**Acute bacterial sinusitis**

In an MA involving adult patients with radiologically confirmed sinusitis no difference in clinical outcome was found between a 3 - 7-day course compared with a 6 - 10-day course of treatment. Comparing a 5-day with a 10-day regimen revealed fewer adverse events with short-course treatment.\(^7\)

**Chronic bronchitis**

Falagas et al.\(^4\) studied 7 randomised controlled trials (RCTs) of patients with acute exacerbations of chronic bronchitis, comparing short-duration (5 days) with long-duration (7 or 10 days) antimicrobial treatment. No difference was found between the two groups with regard to treatment success.

The appropriate duration of therapy is often open to question.

**Community-acquired pneumonia**

A short-treatment arm of 3 - 7 days was compared with a long-treatment arm of 7 - 10 days in an MA of 7 RCTs. No difference was found with regard to clinical success at the end of therapy, microbiological success, relapses, mortality or adverse events.\(^5\)

**Acute pyelonephritis**

No difference was found between short-duration treatment (7 - 14 days) compared with long-duration treatment (14 - 42 days) in terms of clinical success, relapse, recurrence or bacteriological efficacy in an MA of 4 RCTs.\(^6\)

**Cystitis**

Three days of treatment was compared with 5 - 10 days of treatment in women with cystitis. Although there was no difference in symptomatic failure between the two groups, bacteriological cure rates were improved with longer duration of treatment, both at 2 weeks and at 8 weeks of follow-up.\(^7\) However, in another MA of elderly women with cystitis no difference was found with regard to persistence of the infection.\(^8\)

For certain community-acquired infections duration of therapy can be shortened, with a resultant reduction in cost, better patient compliance, less selection pressure for resistant organisms and fewer adverse effects. On the other hand, infections such as endocarditis, osteitis, and septic arthritis, to name a few, still require extended duration of antimicrobial therapy.

References available at www.cmej.org.za