



## Getting the needle

The incidence of HIV/AIDS in infants and children in sub-Saharan Africa has spawned an important debate. On the one hand Gisselquist and collaborators make a case for the horizontal spread of HIV/AIDS to be much higher than generally believed, claiming that much of this is due to medical intervention, especially the use of contaminated injections and infusions (see last month's *SAMJ*). Their views have been challenged in a thoughtful analysis published by Schmid *et al.* (*Lancet* 2004; **363**: 482-488). Two articles in this *SAMJ* add useful information to this debate.

Unexplained HIV-1 infection in children is the subject of a comprehensive analysis by Hiemstra *et al.* (p. 188). Following earlier reports of possible horizontal transmission of HIV-1 infection between siblings, a registry was established at Tygerberg Children's Hospital for further collection of data. Fourteen children with unexplained HIV infection were identified and investigated.

Children acquire HIV-1 infection through vertical transmission occurring *in utero*, during the birth process, or postnatally through breast-feeding. Other recognised routes include contaminated blood products and sexual abuse. In this series intravenous cannulation and intravenous drug administration occurred in all but 2 children before HIV diagnosis. The authors conclude that circumstantial evidence supports but does not prove nosocomial infection.

The other contribution is by Daly, Nxumalo and Bielik (p. 194), who investigated injection practices in Swaziland. Previous studies have found that unsafe injection practices are widespread in West and East Africa and the safety of injection practices in vaccination programmes continues to constitute a worldwide concern. In Swaziland, each child receives 8 injections to complete the routine vaccination schedule during the first year of life and many clients seeking curative services favour injectables over other forms of treatment. Since unsafe injection practices occur even in settings where health care workers have been properly trained, the possible transmission of blood-borne pathogens such as HIV and hepatitis B continues to be a concern. Daly *et al.* found that clients are exposed to unacceptable risks from re-use of syringes and needles.

Conclusions that may be drawn from all these contributions are that there is an urgent need to re-evaluate and improve infection control practices in health care settings, and that there is no longer any justification not to switch to using auto-disposable syringes for all routine and supplemental vaccinations. Of great concern are the limited frequency, quality and impact of supervision.

## Smoking fires new rounds

Yussuf Saloojee fires a critical round at Chris Bateman's 'No smoke without fire' report in the January *SAMJ*, though his response (p. 164) is even more damning of the tobacco industry. Chris in turn brings us up to date on developments concerning the anti-tobacco legislation (p. 150).

While readers may not have interpreted the first Bateman salvo in the negative way that Saloojee has, all this material serves several purposes. The first is that excellent investigative reporting has uncovered several flaws in the proposed legislation. Secondly it has reinforced the importance of responsible responses by the public. Thirdly South Africa's tendency to become what the media has labelled 'a nanny society' is too apparent with the increasing central control through the welter of new laws.

## Bones strengthened

The National Osteoporosis Foundation of South Africa has done the profession a favour by producing a 'position paper' on the use of parathyroid hormone (PTH (1-34)) in the treatment of osteoporosis (p. 175).

The mainstay of current therapies for osteoporosis is antiresorptive agents such as calcium, vitamin D, oestrogen, selective oestrogen modulators, calcitonin and the bisphosphonates. These drugs reduce but do not eliminate fracture risk and do not restore lost bone structure. Anabolic agents have the potential to increase bone mineral density, restore skeletal micro-architecture and reduce fracture risk to a greater extent than the antiresorptives. Recombinant human PTH has emerged as the most promising osteo-anabolic agent to date.

Administration of PTH causes rapid stimulation of bone formation resulting in a marked increase in bone mass, size and strength, as well as improvements in trabecular micro-architecture. Daily subcutaneous injections of PTH (1-34) for as little as 21 months reduced the risk of new vertebral fractures by 65 - 70% and non-vertebral fractures by 35 - 40%. Side-effects have been minimal and it is reasonable to conclude that PTH is safe in human subjects.

With all these wonderful results what is the catch? PTH (1-34) or teriparatide will soon become available as a treatment option for osteoporosis in South Africa, and the usual serious ethical dilemma with regard to the allocation of expensive resources will be posed because of the high estimated cost (R50 000 per annum).

The Osteoporosis Foundation recommends that PTH (1-34) should only be used in patients with severe established osteoporosis and provides further criteria for its use and contraindications. Furthermore, each application for treatment will be assessed by a working group consisting of senior council members of the National Osteoporosis Foundation of South Africa.

Osteoporosis is such a common condition that readers will be intrigued to know if the potential large numbers of applicants will not swamp the proposed mechanism. And what will happen if patients with the means and desire wish to obtain treatment outside of this cosy arrangement?

JPvN