



Antibiotic resistance

Global warming tops the list of the present hotly debated global topics. Another man-made disaster, which has been lurking under the radar as far as the public is concerned, is antibiotic resistance. Think of the consequences of the emergence of multi-drug-resistant TB! In a further timely reminder Brink and colleagues report on the antimicrobial susceptibility profile of selected bacteraemic pathogens from private institutions in South Africa (p. 273), and this is reinforced by an editorial by Jan van den Ende (p. 264). They forcefully underline the unwelcome capacity of bacteria to keep ahead of our efforts in the resistance race.

The study included only selected bacteria, including *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter* species, *Pseudomonas aeruginosa*, *Actinobacter baumannii* and *Staphylococcus aureus*. These were chosen because they represent the most common hospital-acquired pathogens and those in which antibiotic resistance is a recognised problem.

The main and important messages that come from this study are the high levels of resistance to key 'workhorse' antibiotics used in hospitals, the identification of significant prevalences of extended-spectrum β -lactamases and other resistance mechanisms in the Enterobacteriaceae studied, and considerable differences in resistance prevalences between centres. Bacterial resistance to antimicrobial agents, both in community and health care settings, has long been recognised as a worldwide phenomenon of increasing extent and relevance. Acquired resistance (resistance emerging in bacterial species formerly sensitive to the particular agent/s) is also recognised as a consequence of selective pressure in the form of antibiotic usage.

Multiple resistance seriously limits the range of antimicrobial agents available for treatment of infections. In hospital-acquired infections, inappropriate initial antimicrobial therapy is an important determinant of morbidity and mortality. Initial empirical choice is best guided by contemporary susceptibility data at institutional or preferably service and unit (e.g. intensive care unit) level. Exposing the problem of antibiotic resistance underpins the promotion of more effective and judicious use of antibiotics in private hospitals – to which we can add *all* settings.

Peripheral arterial disease in rural black South Africans

Anecdotal experience of a high prevalence of peripheral arterial disease (PAD) in rural blacks by practitioners who have performed large numbers of amputations for gangrenous limbs is confirmed by a study by Kumar *et al.* (p. 285).

Most clinicians diagnose PAD from symptoms such as intermittent claudication and rest pain, and signs such as diminished peripheral pulses, ischaemic ulceration and gangrene, but these are not always reliable and physician

awareness of the diagnosis is low. In most cases PAD can be confirmed by measuring the ankle-brachial pressure index (ABPI), often by Doppler ultrasound. An ABPI of less than 0.9 is diagnostic of PAD.

The validity of ABPI as a diagnostic marker of subclinical arterial disease is confirmed by its adverse prognostic significance for coronary and cerebrovascular events. The 29% prevalence in the over-50-year-old rural black population studied was at the upper end of rates reported internationally. The association of PAD in this study with male sex, diabetes and smoking was not surprising.

Angio-oedema and ACE inhibitor use

A diagnosis of death due to angio-oedema associated with enalapril prompted a review of the records of all admissions to the ICUs in the UCT academic region. Clint Cupido and Brian Rayner uncovered a further 9 cases of angio-oedema requiring intubation related to enalapril (p. 244).

Although angio-oedema is a well-recognised complication of angiotensin-converting enzyme (ACE) inhibitor use, only isolated reports of death have appeared in the literature. Increased risk for angio-oedema was found in blacks, patients with a history of drug rash or seasonal allergy, and patients over the age of 65 years. Most cases occurred during the first months of therapy, but it may occur more than 10 years after initiation of treatment. The authors consider it unfortunate that angio-oedema is not listed as a compelling contraindication to ACE inhibitors in the latest South African Hypertension Guidelines.

Steroids and antihistamines are ineffective as the mechanism of the reaction is not allergic but related to bradykinin. Adrenaline may be helpful, but if there is a suspicion of airway compromise endotracheal intubation should be performed immediately and if unsuccessful an emergency cricothyroidotomy or tracheostomy should be performed.

Early black doctors in South Africa

The first of a historical series on black doctors by Anne Digby appears in this issue of the SAMJ (p. 252). Dan Ncayiyana (p. 219) adds a fascinating personal glimpse into the times and the practice of Dr James Moroka, an iconic political leader and rural general practitioner.

The importance of the Scottish influence on education and medicine is evident in these studies. Dr Moroka's story is typical of the early black doctors, who all qualified abroad because of lack of training opportunities here at home. They returned home into leadership positions and had to wrestle with the choice between political activism and their medical careers. The latter also applies to many more recently qualified black doctors, whether qualified locally or overseas, who have played a leading role in the democratisation of South Africa.

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