CME: Breast cancer

This month's CME deals with the topic of breast cancer, a common cancer that consequently receives a lot of publicity. In women who have easy access to screening and medical care, and are aware of the significance of changes in the breast, this cancer presents early and can often be managed very successfully. However, for the majority of our population – and indeed elsewhere in Africa and the developing world – the situation is very different. The cancer presents late, has often already spread, is difficult to manage and has a low cure rate. Jenny Edge and her team concentrate on this aspect of breast cancer. Articles take in the situation in a population of women presenting to Baragwanath Hospital in Soweto, for whom distance to the clinic was a factor in late presentation, as well as management of locally advanced disease, side-effects of systemic therapy, and management of a common post-treatment complication, lymphoedema. These articles should be particularly useful for those who work in the public sector and in private practice in less affluent areas.

Isoniazid prophylaxis – the pros

The March *SAMJ* carried an article from the Desmond Tutu Institute offering the view that isoniazid prophylaxis against tuberculosis (TB) was inadvisable.[1] In this edition we present the opinion from the Aurum Institute[2] that it may substantially improve TB control, particularly for populations at high risk. As we reported in *Izindaba*,[3] picking up on the mining indaba recently held in Cape Town, the moment a TB carrier (i.e. dormant) becomes HIV-positive and the immune system is progressively compromised, the risk of developing active TB increases.

The prevalence of undiagnosed disease is the driving force of TB transmission at a population level and has changed little at goldmines, based on two surveys a decade apart. The first Aurum Institute survey in 2000, including some 2 000 miners, revealed that 2.5% of them had undiagnosed active TB. The second probe in 2011 (this time of 13 000 miners), done as part of Churchyard's latest research and recently published in the *New England Journal of Medicine*, uncovered a similar prevalence (2.3%).

I learned (at a recent talk by National Minister of Health Motsoaledi) that 46% of coalminers in the coal/power station belt are HIV-positive. Our continued supply of coal/electricity therefore depends on more than whether the coal is wet or not.

To frack or not to frack?

South Africa (SA) is about to embark on exploratory high-volume hydraulic fracturing (fracking) to extract the huge reserves of natural gas contained in shale rock. Mash *et al.*[4] summarise the health concerns and discuss them in the SA context. Hundreds of chemicals are used during the drilling and fracking phases, but access to information on them has been limited owing to protection under proprietary legislation. Table 1 in the article shows some of the known chemicals and the purposes for which they are used, while Fig. 1 presents data on 353 of the known chemicals and the percentage of these associated with a variety of potentially adverse effects on health, 77 of which (Table 2) are associated with ≥10 potential adverse health effects.

'The Revenge of Geography'[5]

Two papers[6-7] are 'must reads'.

Only a small area in SA is malaria endemic – in the north-eastern part of KwaZulu-Natal, and in Mpumalanga and Limpopo provinces. All cases of malaria in other parts of the country are imported, either from malaria-endemic regions of SA or from further afield. Many foreign migrants come from malaria-endemic areas and present to SA healthcare services after arrival. A survey ('The burden of imported malaria in Cape Town'[5]) over 4 years of 118 patients in whom malaria was diagnosed at the National Health Laboratory Service referral laboratory at Groote Schuur Hospital, serving Western Cape clinics and regional hospitals, revealed that 48% (*n*=57) of patients originated from Somalia, 8.5% (*n*=10) from SA, 30% from other countries in Africa, and 15.5% (*n*=18) from countries outside Africa – mostly Bangladesh (*n*=15; 13%). Of the SA patients, all had travelled to malaria-endemic areas apart from one patient who acquired malaria via a transfusion of platelet concentrate received while an inpatient at GSH. These patients, typically migrants, often have severe falciparum malaria and risk being mismanaged owing to incorrect antimalarial treatment and several re-admissions due to treatment failure from lack of appropriate treatment with Coartem.

Then there is the issue of odyssean malaria, i.e. malaria transmitted by translocated infected mosquitoes. Cases are inevitable in SA, given the volume of road, rail and air traffic from malaria risk areas into Gauteng and other non-endemic provinces. Road traffic from endemic areas in and around SA is the source of most of the malaria-bearing mosquitoes. Odyssean malaria cases are easily missed, with a consequent dangerous delay in diagnosis; the fever is incorrectly ascribed to some other infection. Reporting on outbreaks in Gauteng from 2007 to 2013, Frean *et al.*[7] warn that malaria should always be kept in mind as a cause of unexplained fever and thrombocytopenia, even in the absence of a travel history. A key question to all such patients is: do you live in close proximity to a national highway, airport, train station, bus depot, taxi rank or other public transport node?

The visual prostate symptom score

Heyns *et al.*[8] from Stellenbosch University and Windhoek Central Hospital, Namibia, have developed and evaluated a visual prostate symptom score using pictograms to rapidly assess the degree of bladder outflow obstruction for men whose language is not English, or who have had limited schooling or are illiterate.

Oral and oropharyngeal HPV in a sample of SA men[9]

Oral human papillomavirus (HPV) infection, and specifically HPV type 16 infection, causes up to a 50-fold increase in HPV-positive oropharyngeal squamous cell carcinoma (OSCC). The tumour may originate in the soft palate, tongue base, pharyngeal walls or tonsils. These head and neck cancers are, in their turn, related to sexual behaviour, particularly the lifetime number of oral sex partners. HIV-infected individuals have been reported to have up to a six-fold increased risk for HPV-related OSCC. It is thought that HIV and HPV function as a combined risk factor, as HIV-positive individuals have more frequent HPV infections.

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