

CME: Obstetric medicine

Globally, medical problems in pregnancy are an increasing challenge, and in South Africa (SA) they account for almost 50% of all maternal deaths. While HIV remains the major cause of maternal mortality, non-HIV-related medical problems are increasingly significant.

Obstetric physicians have a specific role in managing pregnant and postpartum women with medical problems, and in partnership with obstetricians can contribute to reducing maternal morbidity and mortality. There are physiological changes in almost all systems in pregnancy, and changes in the cardiovascular and respiratory systems and haematological changes are particularly important when assessing the cause and management of medical problems in pregnant women. Medical problems in pregnancy may be unique to pregnancy, exacerbated by it, or unrelated to it. They may be present prior to pregnancy, or present for the first time in pregnancy. Some are worsened by pregnancy. Pregnant women may improve or remain stable, or their disease may predictably or unpredictably deteriorate.

In this issue of CME, Rosie Burton, Letitia Acquah and their team cover most of the major medical problems that generalists will encounter in their pregnant patients, with practical advice on management and referral.

Should HIV be a notifiable disease?

In 1988, when fewer than 100 people with HIV had been identified in SA, the question of notification was discussed in the *SAMJ*. At the time, the Minister of Health, Nkosazana Dlamini Zuma, strongly advocated notification of HIV. Venter and colleagues^[1] rejoin the debate and suggest that its time is past, because access to HIV testing is now widespread and effective therapy is freely available. They argue that in 2014, setting up the notification debate as one of public health v. human rights is misguided; public health benefits are not large or even likely, and do not outweigh the human rights burdens.

Routine postoperative troponin surveillance after non-cardiac surgery

The only way to identify patients who have had a postoperative troponin leak secondary to myocardial ischaemia after non-cardiac surgery (MINS) is to conduct routine postoperative troponin surveillance – especially as 65% of patients suffering a myocardial infarction postoperatively will be asymptomatic and will also not be recognised through serial ECG monitoring. Torborg *et al.*^[2] conclude that this is a potentially cost-effective intervention, provided effective therapy is immediately provided in response to the troponin leak. The simple and inexpensive introduction of statin and aspirin therapy following diagnosis of MINS has the potential to prevent progression to myocardial infarction; whether such therapy may also decrease mortality is currently unknown.

Hepatitis B

From April 1995, the hepatitis B virus (HBV) vaccine was included in the SA Expanded Programme of Immunisation at 6, 10 and 14 weeks of age. However, no ‘catch-up’ immunisation of older age groups was implemented. Spearman and Sonderup^[3] make the case for ensuring a birth dose (within 12 - 24 hours of delivery) of HBV vaccine to all babies to prevent perinatal transmission. This is even more important when the mother has HIV/HBV co-infection, which increases the risk of perinatal transmission. Challenges will be faced in rural areas where there is a higher prevalence of hepatitis B and home births occasionally occur, but studies have confirmed the thermostability of HBV vaccines outside the cold chain, assisting access to the birth dose in rural areas. A four-dose schedule will be slightly more costly than the current three-dose schedule.

The prevalence of HBV infection in patients with haematological malignancies is higher than that in the general population because of the immune suppression induced by cytotoxic chemotherapy. Immune suppression may also lead to reactivation of occult HBV infection and increased HBV replication. A large group of patients attending the paediatric haematology and oncology unit at Steve Biko Academic Hospital in Pretoria did not have sufficient protective antibodies against HBV at first presentation, despite being vaccinated.^[4] The authors suggest that since such patients are at risk of hepatitis B infection, active surveillance and continued screening for HBV must be done at first presentation of all patients attending a paediatric haematology and oncology unit, and regularly during treatment and follow-up. A programme to immunise all seronegative patients against HBV should be implemented, and the response to immunisation documented. The use of combined passive-active immunisation should be encouraged, especially in children with haematological malignancies and HIV-infected children. An effective screening and vaccination programme in the unit should protect all patients from contracting HBV.

Treatment of atrial fibrillation in SA

Atrial fibrillation (AF) is the most common cardiac arrhythmia, with a prevalence of 5 - 6% in the 65-year-old population, which increases up to 10% in the population aged >80 years. In SA, the prevalence of AF in the urban Black population has recently been documented to be 7% in a cardiovascular disease cohort (8% of heart failure patients, 4% of hypertensive patients, and 13% of valve disease patients). However, very little has been published on AF management outside the developed world.

This prompted the Assessment of the Therapeutic Management of Patients with Atrial Fibrillation in South Africa (SAFIR-RSA), involving 302 AF patients (60% male) from 29 centres.^[5] The principal objective was to assess the baseline characteristics of patients with AF and the treatment modalities utilised, particularly the use of rate and rhythm control strategies. The study also looked at hospitalisation rates and thromboembolic prevention. The mean age (standard deviation) was 67 (13) years (range 21 - 95). The mean waist circumference was 101.6 (17.8) cm and mean the body mass index 28.8 (5.9) kg/m², indicating a high prevalence of overweight patients in the cohort.

The single most prevalent clinical characteristic was hypertension (65.9%). Other coronary risk factors (dyslipidaemia 48.3% and diabetes 15.6%) were also frequent. Concomitant structural heart disease was common, with 27.5% having valvular disease (of which 79.5% had mitral valve disease), 26.8% coronary artery disease, and 32.5% heart failure.

Notably, the prevalence of underlying comorbidities such as coronary artery disease, valvular disease and heart failure was similar (~20 - 30% for each) to those reported in the developed world. For stroke prevention, 75.2% were on warfarin, 39.4% on aspirin and 5% on clopidogrel. The authors concluded that AF is a significant burden in cardiology practice in this country, with considerable resource utilisation and morbidity for patients. The survey also highlighted a lack of rigour in applying definitions of rate control and under-utilisation of antithrombotic therapy.

Rheumatic fever and RHD in Gauteng

The last epidemiological study of rheumatic heart disease in schoolchildren, undertaken 30 years ago in 1972, found a very high prevalence of 6.9/1 000 in children in Soweto, Johannesburg. A marked decline in children presenting with acute rheumatic fever (ARF) and chronic rheumatic heart disease (RHD) over the past two decades has been observed at Chris Hani Baragwanath Academic Hospital in Soweto.^[6] The number of children documented to have ARF and RHD declined from 64 in the year 1993 to 3 in 2010.

This decrease may be attributed to an improvement in socioeconomic conditions and better access to medical care for the referral population over the last two decades, mirroring the improved trend in socioeconomic status of SA's population over the past 15 years. There has been an increase in the average annual household income, improved access to amenities such as electricity, and a decrease in the average household size. This improvement in lifestyle, with less overcrowding, may be important in decreasing exposure to the rheumatogenic strains of the streptococcus organism.

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