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Partners in pregnancy

Close collaboration between cardiologists and obstetricians is required for the optimal management of pregnant patients with underlying cardiac abnormalities.⁽¹⁾ Given the marked physiological changes and the increased demands on the cardiovascular system that occur in pregnancy this seems like a rather obvious statement. However, a closer look at the nature and magnitude of the existing interaction between obstetricians and cardiologists reveals marked room for improvement. Our own experience in the past has been that, despite a special interest in pregnant patients with cardiac pathology, we still care for these patients in parallel with the obstetricians rather than jointly. For the most part the obstetricians would refer these patients to us, as inpatients or outpatients, and we would respond with an opinion documented in the patient's file. Despite the best of intentions we seldom meet at the bedside to make joint decisions. The establishment of a dedicated cardiac obstetric clinic where obstetricians and cardiologists assess the patient side by side and reach consensus on an optimal strategy has gone a long way towards remedying this situation (see article on page 80).

Cardiovascular disease is known to be a leading cause of non-obstetric mortality during pregnancy. The diagnostic and therapeutic options available to the clinician caring for these patients have seen a number of advances and improvements lately, some of which are dealt with in this issue of our Journal. The main causes of cardiac mortality during pregnancy remain hypertensive disorders, valve lesions, cardiomyopathies, congenital heart disease and ischaemic heart disease.

The most common cardiovascular disorder complicating pregnancy remains pre-eclampsia and hypertensive disorders which is estimated to complicate the management of 2% to 8% of pregnancies and is said to contribute to more than 10% of maternal deaths. The current information on these disorders is reviewed on page 68.

Managing pregnant patients with valvular heart disease and dilated cardiomyopathy has often been the challenge confronting cardiologists on the African continent. In developing countries, such as South Africa, women with congenital heart disease reaching child-bearing age have become another group posing unique challenges to the clinicians managing pregnant patients. The most common cardiac condition brought to the attention of the cardiologist during pregnancy locally remains valve lesions. Percutaneous intervention for structural heart disease, including valvular heart disease, has become a very important weapon in the armamentarium of the adult cardiologist involved in the management of pregnant patients. The prime example is balloon valvuloplasty for patients with mitral stenosis and suitable anatomy but a number of patients with severe aortic stenosis can also be taken through pregnancy after performing balloon valvuloplasty. The article on page 76 reviews the management of aortic stenosis, including the role of valvuloplasty, in pregnancy. Percutaneous intervention is becoming increasingly

important in patients with congenital heart disease, for example pulmonary valve implantation in patients with recurrent outflow tract dysfunction following previous repair of Tetralogy of Fallot. There is little published data in this field but these procedures should preferably be performed prior to planning pregnancy rather than during pregnancy. However, intervention for congenital heart disease of the fetus by necessity has to take place during pregnancy. Prenatal diagnosis has opened up the way for fetal cardiac intervention e.g. aortic valvuloplasty in a fetus with aortic stenosis which can lead to the development of a biventricular circulation in a fetus otherwise destined to develop left ventricular hypoplasia.

Although the maternal and fetal outcome for pregnancies in patients with prosthetic valves may be improving⁽²⁾ the risk of an adverse outcome is still very high. So much so that adoption should be considered as an alternative to attempting a pregnancy in women with prosthetic heart valves, particularly if it is a mechanical prosthesis. Unfortunately our own experience is that more often than not women with prosthetic valves seek our assistance only after becoming pregnant and at present we have not yet solved the considerable problems associated with anti-coagulant therapy in pregnancy or the risk of life-threatening valvular dysfunction due to thrombosis of the prosthesis.

Peri-partum cardiomyopathy may be more common in South Africa than the global average, although the available data is scant.⁽³⁾ This condition often only appears in the post-partum period but can manifest towards the end of pregnancy, creating a difficult therapeutic challenge with a high likelihood of recurrence in subsequent pregnancies. Although the link to prolactin appeared to provide a therapeutic target there is as yet no convincing evidence that we have a targeted therapy for this condition.

Myocardial infarction has risen to prominence in South Africa as an important cause of cardiovascular morbidity and mortality in pregnancy. In developed countries this trend is predominantly because of an increase in maternal age. In South Africa it is more likely due to the poor management of traditional risk factors such as smoking and obesity with the accompanying problems of diabetes and hypertension. Despite this, it is postulated that the majority of women suffering a pregnancy associated myocardial infarction does not involve rupture of an atheromatous plaque as is the case in the non-pregnant patient but are ascribed to other mechanisms.⁽⁴⁾ Amongst these are the increased risk for arterial thrombosis and for coronary artery dissection.

Although Marfan's disease is not that common, pregnancy in these patients puts them at considerable risk for aortic dissection. It is important to note that aortic root dilatation due to an aortopathy and the subsequent risk for dissection is not limited to patients with Marfan's disease but also occurs in a number of common congenital heart diseases such as bicuspid aortic valves and Tetralogy of Fallot.

The expansion of the available information regarding heart disease in pregnancy as well as the expansion of the role of percutaneous intervention in the management of structural heart disease has raised the bar for cardiologists. This calls, not only for an increase in knowledge and skills, but also for increased collaboration with obstetricians.

REFERENCES

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