

Obstetrics and gynaecology

THE CONTINUING RISE in the mean age for childbearing has a widespread impact on the practice of obstetrics. It has been accompanied by an escalation in the rate of caesarean section to around 25% in many tertiary centres and into the 35%–45% range in private practice. The reasons are complex, but advancing maternal age, patient request and obstetric litigation are all factors.

Increasing maternal age has brought with it increased exposure to and awareness of the risks of fetal abnormalities. As a “screening test”, maternal age alone performs poorly. At best, its sensitivity for detection of Down syndrome is only 30%, with a false positive rate of 5%–14%. Invasive procedures (chorionic villus sampling and amniocentesis) carry a risk to the pregnancy that is often unacceptable, especially for women who have used assisted reproductive techniques.

There has been a rapid evolution of non-invasive screening methods. Biochemical screening of maternal serum in the second trimester (involving alpha-fetoprotein, unconjugated oestriol, and human chorionic gonadotropin [hCG]; the triple test), coupled with maternal age, has been shown to increase the sensitivity to 60% while maintaining the false positive rate at 5%.

Technical advances have increased the application of ultrasonography. It can be used to examine the nuchal fold, which has been found to increase the risk of Down syndrome 10-fold when thickened to more than 6 mm in the second trimester. Large studies at 11–14 weeks’ gestation have shown that “nuchal translucency” measurements, in combination with maternal age, increase sensitivity to 75%–80%.¹ Combining this with first-trimester biochemical markers (free β subunit of hCG in serum, and pregnancy-associated plasma protein, PAPP-A) may increase the sensitivity to 90%. The latest report of the absence of nasal bone in the first trimester in fetuses with Down syndrome indicates that combination screening could improve the sensitivity to beyond 95% while maintaining a false positive rate of 5%.² If these projections are substantiated in larger studies, Down syndrome screening will shift to the first trimester, with obvious benefit for the mother.

The past decade has seen a veritable explosion in our understanding of fetal physiology and pathology. The concomitant development of ultrasound technology has enabled identification of a higher proportion of fetuses with structural abnormalities. Such diagnoses have made possible early correction of the developmental abnormalities. The most successful fetal therapy is the treatment of severe anaemia from Rhesus isoimmunisation by intrauterine fetal transfusions. Survival rates of over 90% have been achieved. With routine administration of anti-D immunoglobulin, and the consequent fall in the incidence of alloimmunisation, training and maintenance of skill and expertise will be a major challenge.

Maternal drug therapies are widely used. They include folate for preventing neural tube defects; digoxin, with or without flecainide, for fetal tachyarrhythmias; corticoster-

oids for both fetal lung maturation and congenital adrenal hyperplasia; and immuno-

globulin for fetal alloimmune thrombocytopenia. Direct invasive fetal procedures have also been tried over the last decade. Shunts have been inserted in fetuses with bladder-outlet obstruction, idiopathic pleural effusion, and congenital cystic adenomatous malformation of the lung. Open fetal surgery, such as for congenital fetal diaphragmatic hernia and fetal sacrococcygeal teratoma, is rapidly giving way to less invasive endoscopic approaches. With increasing maternal age and the widespread use of assisted reproductive technology comes a rise in multiple pregnancies, with the associated impact of prematurity and the specific complication of twin-to-twin transfusion syndrome, which affects 10%–15% of monochorionic twins. In severe cases, mortality is over 90%. Aggressive amnioreduction can result in survivals of about 60%, but up to 20% of the survivors have long term handicaps. Fetoscopic laser coagulation of the communicating vessels has improved the survival rate to 75%–80%, and reduced the long-term handicap rate to 5%.^{3,4}

The principal changes in gynaecological therapy have come from the introduction of effective alternatives to major invasive surgery. The place of endoscopic surgery for treating ectopic pregnancy, investigation of pelvic disorders and removal of benign adnexal masses is established, but the true costs versus benefits of advanced laparoscopic procedures, such as for hysterectomy, require further evaluation. The development of improved medical alternatives for treating menstrual disorders, including both oral and direct intrauterine delivery systems, have markedly reduced the number of major operations. Similarly, non-surgical therapies in other spheres of gynaecology, such as urogynaecology, are being developed and evaluated.⁵

Complementing these changes has been the active participation in the Cochrane Collaboration by women’s health professionals, so that the specialty is no longer the holder of Archie Cochrane’s “wooden spoon”.



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