Editorial

Obstetricians, Perhaps It's Time to Change Lenses

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Times have changed. Maternal mortality rates at the start of the 1900s were around 1 in 100 live births in the best maternity institutions.[1] This has declined by around 3 orders of magnitude in the last 100 years to about 3 in 100,000 live births in places like Singapore.[2] Perinatal mortality rates have similarly declined over the same time, especially in less developed regions.[3] It would seem that there is no safer time to have a baby than in the present.

Unfortunately, there appears to be a trade-off in terms of the practice of obstetrics, especially where the route and timing of delivery are concerned. There is little need to draw attention to the inexorably rising caesarean section rates. It is a well reported and sad story. Caesarean deliveries have been climbing globally since the 1970s to more than 50% in some parts of the world.[4] The World Health Organization (WHO) reports on the situation in Latin America[4] and Asia[5] paint a bleak landscape of obstetric practice with the trend pointing to abdominal delivery becoming the default choice of obstetricians and uninformed patients. In both regions, increasing development and resources seem to promote rather than decrease operative delivery.[4-6] In a hilarious debate with one of the authors (Sir S Arulkumaran) in Singapore in May 2012, prominent obstetrician and researcher, Professor Nicholas Fisk facetiously described modern obstetric practice as "a 9-month preoperative consultation."

A related but less well known issue is that of late preterm births. While overall preterm birth rates have fallen recently,[7] late preterm births i.e. deliveries between 34 and 36 weeks for singleton births increased nearly 20% from 1990 to 2006 in the USA.[8] Many of these late preterm births are due to early induction of labor or a scheduled cesarean delivery between 34 and 36 weeks of gestation without a medical reason for the early delivery.[9]

There is no evidence that these changes of practice have improved maternal or perinatal safety or reduced medico-legal costs.[10] Beyond the sad reflection of the state of obstetrics, there is emerging evidence that these trends may have serious consequences for the children involved as well. Late preterm birth are associated with differences in gene expression of metabolically important genes.[11] Caesarean deliveries are associated with increased gastrointestinal disease in children[12] as well as with increased rates of asthma and allergic rhinitis,[13] and Type 1 diabetes,[14] perhaps due to an effect on the infant gut microbiome.[15]

We should be thankful that modern medical and obstetric knowledge has allowed us to avoid many of the hazards that pregnant women were subjected to in the beginning of the last century. However, the last hundred years have also engendered new, higher expectations. In developed countries, patients are no longer content with just the safe delivery of a healthy baby at the end of their pregnancy. There is increasing demand among mothers to be involved in the decisions regarding the conduct of their delivery. Many mothers consider, and rightly so, that pregnancy and childbirth are natural, physiological events. And, unless they or their babies suffer from some pathology, their pregnancies should be allowed to unfurl as naturally as possible. This is not to say that unexpected complications will not suddenly afflict a healthy pregnancy. But, as masters of our science and craft, obstetricians should be able to manage these without imposing unnecessarily defensive clinical measures in the management of a healthy pregnancy and labour.[16] Without being complacent, obstetricians can safely take a less intrusive approach to the management of women in pregnancy and childbirth.[17-19]

A second, and perhaps, more important change in approach that obstetricians need to consider is their role as guardians of women's and their babies' health, not just during pregnancy and childbirth, but in the long run. Many obstetricians consider their job done once the puerperium is over, with little thought about the preventative health of the mother beyond routine Pap smear screening. For example, women with gestational diabetes mellitus are seldom followed up unless they continue to exhibit impaired glucose tolerance. The fact is that up to 40% of women with gestational diabetes subsequently go on to develop frank diabetes within 10 years[20-22] as well as having significantly

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higher risk of cardiovascular disease.[23,24] The same fate awaits their babies as they grow up with a four-fold increase in the risk of diabetes mellitus and the metabolic syndrome.[25-28] Another common problem that is considered strictly obstetric and unrelated to subsequent health is pre-eclampsia. Women with pre-eclampsia or growth-restricted babies are rarely considered to be at special risk until their next pregnancy. However, women with pregnancies complicated by pre-eclampsia and IUGR are at increased risk of developing chronic hypertension, diabetes mellitus, ischemic heart disease, cerebrovascular disease, kidney disease, thromboembolism, hypothyroidism, and even impaired memory.[29] Maternal hypertensive disorders during pregnancy also predispose the baby to subsequent impaired cognitive development[30,31] and adiposity.[32] Knowing these risks, obstetricians should take an active health screening stance as well as develop systematic follow-up and referral strategies for their charges. Pregnancy, with its dramatic hormonal and haemodynamic upheavals, could be viewed as Nature's stress test for women and we should be vigilant in following up the abnormalities it reveals.[33]

We are blessed in developed countries with well-resourced healthcare systems that render maternal mortality more of academic interest than a daily struggle. But as our population ages and birth rates decline, obstetrics is a specialty that is struggling to maintain its relevance. As we begin 2013, perhaps it is time for obstetricians to view their roles with a different set of lenses. We should not see ourselves as doctors of diseased women needing our intervention but as facilitators of natural physiology, knowing when to step in before things go wrong. We should not, however, miss the opportunity to promote the subsequent health of women and their babies when they do develop obstetric complications that are signals for future dysfunction. The acquisition of any new lenses is wont to cause some discomfort initially but is essential if our vision is to remain clear and steer us in the right direction.

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