



# Exciting Times in Fetal Medicine Require a New Journal

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These are exciting times in fetal medicine. The recent leaps in technology—better ultrasound machines, microarrays, next gene sequencing technology, and cell free fetal DNA (cffDNA) in maternal blood—portend a new era in fetal medicine. Combine this with the recent reduction in infant mortality rates in India and other developing countries, screening programs in the community for disorders that cause disabilities (like the Rashtriya Bal Swasthya Karyakram in India), improved technologies for diagnosis of birth defects, and above all enhanced awareness of the public regarding birth defects and disabilities, and one can see that the field is headed for a bright future. On the other hand, the journals in the field of fetal medicine are extremely few. Indeed there is none from the developing countries, where much of the action is taking place with a veritable revolution in antenatal care. Developing countries are home to a large number of births, 26.642 million a year in India alone [1]. It is indeed a grand challenge to provide optimal care to all these babies in fetal life, to see that they achieve a good weight, are born without suffering from asphyxia and other neonatal complications, and are normal in structure and function. It is in these thrilling times that the Society of Fetal Medicine was born, and the Journal of Fetal Medicine (JFM) came into being, to represent the views and efforts of the members of this society, as well as other experts in this field, both in India and abroad. The international publisher (Springer India) agreed to provide a platform and to publish this journal using their vast resources, and beam the contents to an international audience.

The efforts to bring this journal to life have finally borne fruit. The JFM has a distinguished international and national editorial board membership. We proudly present the inaugural issue. We are confident that as the journal becomes better known in the community of fetal experts, the future issue would be better and bigger. It is hoped that the journal will present not only original articles and reviews on fetal medicine, but also interesting and educative case reports, news in this field from different countries, recent advances and how they should be applied in the developing countries. Guidelines in ultrasound techniques and invasive procedures developed by experts in the topics will form an important part of the contents. Indeed in this issue, we publish the guidelines for the second trimester anomalies scan, the first in the series [2]. The technology for ultrasound imaging has progressed by leaps and bounds, and we look forward to the day when the 3D ultrasound pictures of the face will be used for diagnosis of dysmorphic syndromes. The ultrasonologist, who is now a morphologist will become a dysmorphologist, capable of recognizing babies with abnormal features and be able to fit them into a specific syndrome. However, the need in the developing world is still to ensure that the majority of ultrasonologists can take a correct nuchal translucency measurement, diagnose spina bifida from the decreased intracranial translucency in the first trimester between the posterior border of the brain stem anteriorly and the choroid plexus of the fourth ventricle posteriorly [3], and record nuchal fold thickness in the second trimester. Our leading experts in the field have lots of experience but are slow in publishing their data, so we still lack standards for nuchal translucency, nuchal fold thickness, size of nasal bones in the Indian population etc. It is generally believed that the standards of these measurements would be much lower, although we have a solitary published paper to support this [4].

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The cytogenetic field has also undergone a revolution. There are many laboratories with experience in FISH technology, and this has been studied quite extensively in India. QF PCR technology is also well established. While we were still debating whether to replace FISH and culture of amniotic fluid cells with only FISH or QF PCR, the micorarrays were introduced, to detect copy number variation, giving another dimension to detection of abnormalities in chromosomes in fetal tissues. A number of laboratories are performing micorarray studies, but their interpretation needs to be improved. For some time, we cannot accept the recommendation of the Western experts that micorarray should replace routine karyotyping of fetal tissues, partly because of cost and partly because of lack of expertise in interpretation [5]. Therefore, in the current scenario micorarrays would continue to be reserved for cases where fetal abnormalities are identified on ultrasound. Secondly, we have to keep in mind that the tolerance of fetal abnormalities by Indian women is extremely low because they are prepared to terminate the pregnancy rather than accept risk of a fetus with congenital abnormalities or intellectual disability.

Biochemical screening had become part of standard practice by Indian obstetricians, leading to a large number of amniocentesis being performed. However, the use of cffDNA in the maternal blood for the diagnosis of fetal aneuploidy has burst in the market and promises to change the playing field [6]. The test is being “pushed” vigorously by the companies that have introduced this in the Indian market and is beginning to gain acceptance among the obstetricians. It will take some time before this technique is

used appropriately in India. One reason for this is that very often women come at about 20 weeks of pregnancy with abnormal biochemical screening results or abnormal ultrasounds, and the 10–14 days required for the results of analysis of cffDNA makes this test unacceptable, more especially because the Indian law does not permit termination beyond 20 weeks of gestation.

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