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LETTER TO THE EDITOR

Re: Maternal and Fetal Outcomes of Triplet Gestation in a Tertiary Hospital in Oman

رد: نتائج الحمل ثلاثي التوائم في الأمهات والأجنة في مستشفى رعاية ثالثي في سلطنة عمان

Sir,

I read with interest the study by Al-Shukri *et al.* published in the SQUMJ May 2014 issue.[1] Of the 18 sets of triplets, the authors stated that 16 (89%) were conceived through assisted reproductive technology (ART) and the remaining two (11%) were conceived spontaneously.[1] Among the 54 studied neonates, neonatal complications included hyaline membrane disease in 25 (46%), hyperbilirubinaemia in 23 (43%), sepsis in 18 (33%), anaemia in 8 (15%), patent ductus arteriosus/atrial septal defect in 5 (9%) and necrotising enterocolitis in two neonates (4%). Surprisingly, there were no cases of birth defects reported. This seems interesting considering the following two points.

First, it is well-known that ART is significantly associated with various genetic and chromosomal anomalies.[2,3] It is unclear if such an association is related to underlying infertility, the use of ART or maternal and paternal risk factors. Recently, there is increasing evidence that infertility or subfertility is an independent risk factor for obstetrical complications and adverse perinatal outcomes, even without the use of ART.[4] Second, birth defects are common in Oman with a substantial birth prevalence of major malformations (25.2 per 1,000 births), where genetic factors were found to be generally implicated for 63.4% of congenital malformations.[5]

I presume that the reasons behind the lack of cases of birth defects in Al-Shukri *et al.*'s study might be related to the short three-year study period (between January 2009 and December 2011) as well as to the other three limitations already mentioned by the authors, namely the small study population (n = 18), the retrospective nature of the study and the fact that it was a single centre experience.[1] Conducting large-scale multicentre studies over extended periods of time could better address the exact perinatal outcomes of ART-associated triplet pregnancies in Oman.

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Response from the Authors

Sir,

We thank you for your interest in our work and for your valuable comments. Although it was not highlighted in our article, birth defects or congenital abnormalities were included in the collected data. Among the 54 neonates, no birth defects were found (either major or minor) up to the point of their discharge from the hospital.[1]

The study which reported the prevalence of birth defects in Oman (25.2 per 1,000) studied 524 neonates among 20,828 Omani singleton births over a 10-year period.[2] The data were also from a single hospital that covered one unique area of Oman (the Al-Dakhiliyah region in Nizwa). A total of 70 out of the 524 neonates (12.9%) were reported to have chromosomal abnormalities.[2] A study from another region of Oman does not match this high prevalence.[3] The small population of patients in our study were heterogeneous in terms of their regional background.[1] Cytogenetics testing for chromosomal abnormalities were not performed for any of the neonates as there was no clinical suspicion of birth defects or dysmorphic features. In the United Arab Emirates, 401 out of 24,233 infants had a major defect, with an incidence of 16.6 per 1,000.[4]

If it is assumed that the reported incidence of birth defects (25 per 1,000) is representative of the whole Omani population,[2] one congenital abnormality would have been missed in our studied population.[1] Although 16 out of 18 of the studied pregnancies were treated for infertility,[1] this number is not powered to support either infertility or ART as risk factors for birth defects. As highlighted in your comments, our study had limitations in terms of reporting a significant rate of birth defects.[1] We strongly agree that large-scale multicentre studies over an extended period of time are imperative to determine the outcomes of ART-associated triplet pregnancies in Oman.

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