

The prevalence of uterine anomalies and their impact on early pregnancy in women undergoing assisted reproduction treatment

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Objective: To estimate the prevalence of congenital uterine anomalies in subfertile women and to evaluate their influence on early pregnancy following assisted reproduction treatment (ART).

Material and methods: We prospectively recruited 1392 subjects undergoing ART over a period of 5 years from 2004 - 2009. 3D TVS was performed in the early follicular phase of the menstrual cycle (day 2-5) and repeated in the late follicular phase (day 10-14) if the shape of the uterine cavity could not be assessed in the first scan. A subset of the subjects who conceived after ART were followed up to 12 weeks of gestation. The miscarriage rate among women known to have uterine anomalies was compared with that experienced by women having normal uterine shape by the Chi-square test.

Results: 1385 subjects were included for final analysis after excluding seven subjects who had fibroids distorting the uterine cavity. Whilst 1201 (86.7%) subjects had a normal uterine cavity, uterine anomalies were demonstrated in 184 (13.3%) subjects. Arcuate uteri represented the commonest anomaly (n=164; 11.8%) followed by septate (n=7; 0.5%), subseptate (n=5; 0.4%), unicornuate (n=6; 0.4%), bicornuate (n=1; 0.1%) and T-shaped uteri (n=1; 0.1%). A total of 440 subjects who underwent ART have been followed up: 57% of subjects (43/76) with uterine anomalies and 43.4% matched controls (158/364) with normal uteri conceived. First trimester miscarriage was comparable between the groups: 18.6% (8/43) of those with uterine anomalies compared to 12.7% (20/158) in the controls (P=0.32). The miscarriage rates associated with the arcuate uteri was 13.9% (5/36).

Conclusions: Women who are referred for ART have a high prevalence of congenital uterine anomalies, the most common anomaly being an arcuate uterus. However, the first trimester miscarriage does not appear to be increased in these women although this needs to be evaluated in a much larger population.