Is a large arcuate more detrimental than a small one? How important is an arcuate uterus? A prospective study of 1280 consecutive patients with secondary infertility.

Introduction: An arcuate uterus is seen on 3D sonohysterography in up to 30% of women undergoing infertility investigation. This is the first study using strict criteria to sub-classify arcuate uteri and compare miscarriage rates between the groups and with normal uteri.

Methods: 3D sonohysterography was performed on 1280 consecutive patients undergoing full initial secondary infertility investigations at an academically-oriented private practice from October 2010 to March 2011. All patients had previous pregnancies, not electively terminated. The patients provided obstetrical histories. Only patients with no MDA or arcuates were included. Arcuates were diagnosed using strict ASRM criteria, using the Sorenson correction. Small arcuates were ones whose endometrial indentation was 2,3, or 4 mm. Moderate arcuates were 5 or 6 mm. Large arcuates were 7,8, or 9 mm. Chi Square Tests of Independence and one-way ANOVA were performed to determine significant difference in miscarriage rates between the groups.

Results: Of the 1280 patients, 887 (69.3 %) had no MDA. Of the 393 patients with arcuates, 220 (17.2 %) were small, 123 (9.7 %) were moderate and 50 (3.9 %) were large. There was a statistically significant difference between the miscarriage rates of patients with arcuate deformities and those with no MDA [$F(1,1278) = 20.58$, $P < 0.01$], but not between different arcuate subgroups [$F(2,390)=0.006$ $p=0.99$].

	No MDA	Small Arcuates	Moderate Arcuates	Large Arcuates	Significance
# of patients	887	220	123	50	
% of patients	69.3%	17.2%	9.7%	3.9%	
Mean # misc	0.83	1.15	1.14	1.16	$P < 0.01$

Conclusions: This is the first study using 3D sonohysterography and strict criteria showing a significant difference in miscarriage rates between patients with no MDA and arcuates. The size of the arcuate had no significant influence on miscarriage rate. Further investigation to evaluate the implications of these findings is warranted.

Arcuate Uterus…