

# EP04.17. Uterine morphology and anomalies in women with and without polycystic ovary syndrome: a systematic review and meta-analysis.

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## Objectives

To determine if polycystic ovary syndrome (PCOS) influences the morphology of the uterus and the prevalence of congenital uterine anomalies.

## Methods

The primary outcomes included uterine malformations, dimensions, and volume, assessed using non-invasive and invasive methods in observational studies comparing PCOS and non-PCOS patients. We excluded case reports, reviews, studies without control groups, and articles reporting exclusively on polycystic ovary morphology. The PCOS subjects and controls were compared based on odds ratio and 95% confidence intervals (OR, 95%CI), using Mantel-Haenszel random effects model. A P-value of  $\leq 0.05$  was considered significant. The modified Newcastle-Ottawa scale was used to assess the quality of the included research.

## Conclusion

Available evidence of very low quality shows a possible association between PCOS and some uterine anomalies. Further research is needed to confirm these findings.

## Results

Our search retrieved 1929 identified publications, including 11 articles (10581 women). The majority of the studies were of poor quality. PCOS was associated with higher prevalence of uterine anomalies (OR=5.96; 95% CI=1.22-29.17,  $p=0.028$ ). The general count of uterine malformations was significantly higher in the PCOS group (25.0%, 95%CI 6.9-43.2, range 0-49%) than in the non-PCOS group (5.3%, 95%CI 0.5-14.8, range 0-23.1%). The studies had a very high heterogeneity. The scope of uterine malformations possibly linked to PCOS included septate, didelphys, I-shaped (morphology that is not recognized by any main classifications), and dysmorphic uteri. The septate uterus was the most often reported malformation. Altered dimensions included fundal indentation depth and angle. Available research used four classification systems: the most frequently reported was that of the American Fertility Society 1988 (3/11). Six studies did not use any classification. The assessment methods included 2 and 3-dimensional ultrasound, magnetic resonance imaging, hysterosalpingography, laparoscopy, and hysteroscopy.

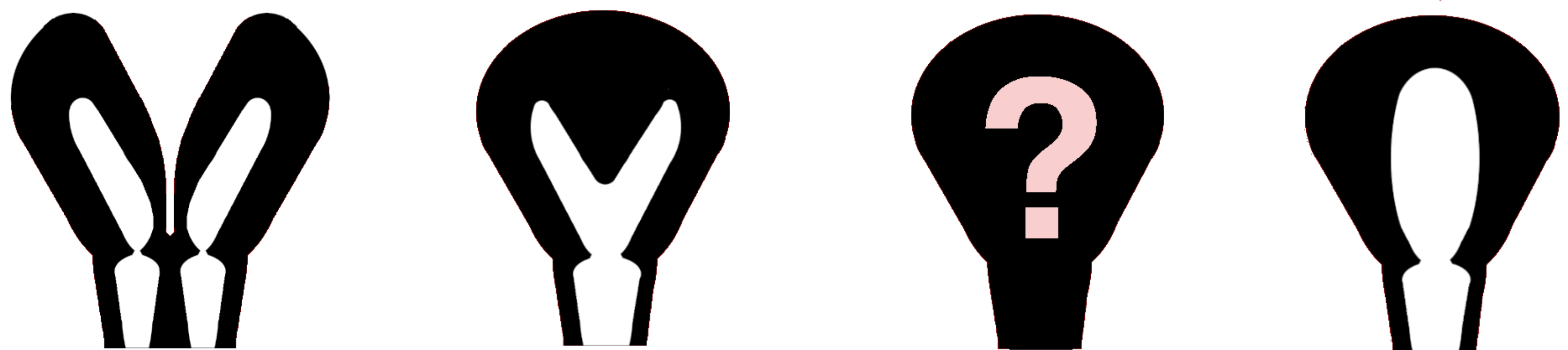


Figure 1. Uterine anomalies with higher prevalence in PCOS: didelphys, septate, dysmorphic, and I-shaped uteri.