

5.2 Tubal patency testing

Should women with PCOS and infertility due to anovulation alone with normal semen analysis undergo tubal patency testing prior to starting ovulation induction with timed intercourse or intrauterine insemination?

Clinical need for the question

One of the leading causes of female infertility is tubal pathology, potentially affecting around 30% of infertile women. The diagnostic assessment of infertility often includes tubal testing by hysterosalpingography, ultrasound (saline infusion sonohysterography, hysterosalpingo-contrast sonography, hysterosalpingo-foam sonography) or laparoscopy. PCOS is the most frequent cause of anovulation in infertile women and ovulation induction is the most common treatment. More detailed clinical context can be found in the technical report in section 5.2. However, there is inadequate information about the indications and need for tubal patency testing for intrauterine insemination with normal semen analysis in infertile women with PCOS.

Summary of systematic and narrative evidence

Given the extensive studies included and the meta-analyses, please see the technical report for detailed references and study characteristics in [Section 5.2](#).

On systematic review, of the eligible 57 studies (after integrity check) across all relevant infertility studies in PCOS, none met the inclusion criteria for this question on tubal patency testing. Therefore, the available evidence has been reviewed narratively.

There is no evidence to support that tubal disease is more frequent in women with PCOS.²⁷³ In a large study with 1002 women with PCOS, 33 had tubal abnormalities (3%) with 97% having at least one patent fallopian tube or a normal uterine cavity.²⁷⁴ Other studies similarly show 3-5% tubal abnormality in PCOS.

In terms of methods used to assess tubal patency, a multicentre, prospective, comparative study with a randomised design, showed that hysterosalpingo contrast sonography produces similar tubal pathology findings in a majority of infertile couples and, where they differ, a difference in findings does not lead to substantial difference in pregnancy outcome, while hysterosalpingo contrast sonography is associated with significantly less pain.²⁷⁵ The authors suggested that Hysterosalpingo-Foam Sonography can be preferred as first-choice tubal patency test during fertility work-up. In case of suspected tubal pathology or inconclusive results, further testing can be done.

Whilst adverse effects from tubal patency testing are not common, inconvenience, cost and discomfort can occur and tubal patency testing may be more appropriate when targeted to those at increased risk of tubal infertility. In this context, consideration of risk factors for infertility associated with tubal pathology in PCOS including those with:

- a history of previous abdominal septic surgery like peritonitis or pelvic surgical procedures
- a history of sexual transmitted infection or pelvic inflammatory disease or a positive serum test for sexually transmitted infection
- concomitant endometriosis.

