Title **Ovulation Induction Drug Therapy for Anovulatory Infertility Associated With Polycystic Ovary Syndrome**

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Aim

To critically appraise and synthesize the published evidence regarding the safety and efficacy/effectiveness of ovulation induction (OI) drug therapy to manage anovulatory infertility associated with polycystic ovary syndrome (PCOS) in women of reproductive age.

Conclusions and results

The question of which is the safest and most effective OI drug therapy for women with PCOS could not be definitively answered. Twelve randomized controlled trials (RCTs) and 6 systematic reviews showed:

- Clomiphene citrate (CC) remains the pre-eminent treatment because of its relative safety, effectiveness in achieving ovulation, simple mode of administration, and comparatively low cost
- Gonadotrophin therapy is the next treatment choice for women who do not ovulate or conceive in response to CC therapy
- Metformin as a pretreatment and co-treatment with CC was successful in increasing the chances of achieving pregnancy in selected cases
- The clinical utility of using pulsatile gonadotrophin releasing hormone (GnRH) for this indication remains to be established
- There is no clinical advantage in the routine use of GnRH analogue in addition to gonadotrophin therapy.

Recommendations

Reliable data were limited. OI drug therapy appears to be effective, but the evidence is insufficient to identify the safest and most effective agent. Candidates for OI drug therapy should be informed in advance about their chances of achieving pregnancy and the potential risks. Appropriate OI therapy should encompass careful use of the drug, close monitoring for adverse events, and long-term followup. Gonadotrophin therapy should be restricted to centers with appropriate expertise.

Methods

Literature databases and websites of health technology assessment agencies, research registers, and guidelines were systematically searched (Jan. 1993 to Oct 2003). RCTs comparing OI drug therapy with other OI treatments, placebo, or no treatment in women of reproductive age with anovulatory infertility associated with PCOS were included. The selected RCTs were screened and analyzed by two reviewers using predetermined quality criteria. Systematic reviews reporting on the safety and efficacy/effectiveness of OI drug therapy alone for this indication were also included.

Further research/reviews required

Large scale, well-designed, well-executed RCTs with longer followup are needed. Accurate and detailed subclassification of women with PCOS would also be helpful. Data on the overall cost of the various OI drug therapies are needed to help patients make decisions and to augment the formulation of policy for using this therapy.

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