ISGE
GYNECOLOGICAL ENDOCRINOLOGY
THE 18TH WORLD CONGRESS
7-10 MARCH 2018 FLORENCE, ITALY

Subcutaneous progesterone versus vaginal progesterone for luteal phase support in in-vitro fertilization (IVF): a systematic review and meta-analysis

J K Bosdou (GR) [1], L ZEPIRIDIS (GR) [2], G F GRIMBIZIS (GR) [3], B C TARLATZIS (GR) [4], E M KOLIBIANAKIS (GR) [5]

Context: Progesterone is currently the treatment of choice for luteal phase support and is usually administered vaginally, orally or intramuscularly. Although vaginal route is generally well-tolerated, its administration is usually associated with vaginal discharge and patient discomfort. Thus, a water-soluble progesterone has been developed for subcutaneous administration as an alternative to vaginal progesterone. However, prior to its adoption in routine clinical practice, its effectiveness regarding the probability of pregnancy should be thoroughly evaluated.

Objective: The aim of this systematic review and meta-analysis is to assess whether subcutaneous progesterone is equally effective compared to vaginal progesterone for luteal phase support regarding pregnancy achievement in patients undergoing IVF.

Methods: A systematic review and meta-analysis was performed aiming to identify randomized controlled trials (RCTs) evaluating the effectiveness of subcutaneous progesterone compared to vaginal progesterone for luteal phase support in women undergoing IVF.

Patients: Three eligible RCTs evaluating 1602 patients.

Interventions: Two RCTs compared the administration of subcutaneous versus vaginal progesterone in patients who underwent fresh embryo transfer after ovarian stimulation for IVF/ICSI. One RCT evaluated the use of subcutaneous versus vaginal progesterone in frozen embryo transfer cycles.

Main Outcome Measures: Primary outcome measure was achievement of pregnancy, expressed as either clinical pregnancy or live birth. Secondary outcome measures included number of cumulus-oocyte complexes (COCs) retrieved and number of embryos transferred.

Results: No significant differences were observed by synthesizing data from studies comparing subcutaneous to vaginal progesterone, regarding number of COCs retrieved (WMD: +0.70 COCs, 95% CI: -0.49 to +1.89) and number of embryos transferred (WMD: -0.06 embryos, 95% CI: -0.20 to +0.09). Moreover, no significant differences were observed in clinical pregnancy rate (OR: 0.88, 95% CI: 0.72 to 1.08), live birth rate (OR: 0.90, 95% CI: 0.73 to 1.12) and miscarriage rate (OR: 1.03, 95% CI: 0.56 to 1.89).

Conclusions: Currently, no significant differences appear to exist between subcutaneous and vaginal progesterone for luteal phase support in terms of pregnancy achievement. Subcutaneous progesterone might be an alternative treatment option for women undergoing IVF treatment who do not tolerate vaginal progesterone.

[1] MEDICAL SCHOOL, ARISTOTLE UNIVERSITY OF THESSALONIKI, [2] MEDICAL SCHOOL, ARISTOTLE UNIVERSITY OF

THESSALONIKI, [3] MEDICAL SCHOOL, ARISTOTLE UNIVERSITY OF THESSALONIKI, [4] MEDICAL SCHOOL, ARISTOTLE UNIVERSITY OF THESSALONIKI, [5] MEDICAL SCHOOL, ARISTOTLE UNIVERSITY OF THESSALONIKI