

Association of the number of follicles of various sizes and treatment protocol with multiple pregnancies following ovulation induction and intrauterine insemination

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[View references \(4\)](#)

Abstract

Objective: To find the relationship between the number of follicles of different sizes and the stimulation protocol to the probability of multiple pregnancies. **Methods:** Out of 234 cycles of OI-IUI in a university based infertility center, between March 2012 to March 2016, there were 222 clinically pregnant cycles. The following variables were tabulated for each cycle: female age, treatment protocol, follicle number and size on the day of hCG administration and number of gestational sacs detected by transvaginal ultrasonography at 9 weeks of gestation. Ovulation induction was done by cc, cc+hMG or hMG. Follicles were categorized by size as ≥ 14 mm, ≥ 10 mm and ≥ 12 mm. To find the relationship between singleton and multiple pregnancy with the average number of follicles of different sizes and the protocol of treatment, a statistical analysis was performed. **Results:** There were 38 (17.1%) multiple pregnancies in 222 pregnant cycles, consisting of 26 (8.1%) twin, 11 (4.9%) triplet and 1 (0.4%) quintuplet. Multiple pregnancy rate in cc, cc+hMG and hMG cycles were 9.1%, 12.2% and 10% respectively. There was no significant relationship between different treatment protocols and the risk of multiple pregnancy ($p > 0.05$). The number of follicles ≥ 12 mm or ≥ 10 mm or ≥ 14 mm had significant relationship with single and multiple pregnancies ($p < 0.05$), but the correlation coefficient was higher for ≥ 14 mm follicles. The mean age of the singleton and multiple pregnant women was not significantly different ($p > 0.05$). **Conclusions:** The risk of multiple conceptions is related to ≥ 14 mm follicles in addition to the total number of follicles ≥ 12 mm. Different protocol of ovulation induction revealed no relationship with the risk of multiple conceptions.

Indexed Keywords

EMTREE drug terms: chorionic gonadotropin; clomifene citrate; human menopausal gonadotropin; progesterone

EMTREE medical terms: adult; article; combination chemotherapy; controlled study; correlation analysis; female; human; infertility; intrauterine insemination; major clinical study; monotherapy; multiple pregnancy; ovary follicle; ovulation induction; pregnancy outcome; probability; risk assessment; transvaginal echography; twin pregnancy

Chemicals and CAS Registry Numbers: chorionic gonadotropin, 9002-61-3; clomifene citrate, 50-51-9; human menopausal gonadotropin, 61489-71-2; progesterone, 57-83-0

Drug tradename: menogon, lbsa, pregnyl, Organon.

Manufacturers: Drug manufacturer: lbsa; Organon.

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