Impact of endometriosis compared to other infertility disorders on the pregnancy outcome in patients undergoing intrauterine insemination

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Objective: Endometriosis is a common problem affecting up to 15-20% of infertile patients. Intrauterine insemination (IUI) is a simple and easy method that can be effective in some infertile patients. The purpose of our study was to compare the effect of endometriosis on IUI outcome after various forms of ovarian stimulation with other infertility disorders.

Design: Retrospective study.

Materials and Methods: We included 1489 cycles of patients undergoing IUI during January 2003 till July 2005 at Cleveland Clinic. Patients were classified into 4 groups. Patients with endometriosis (group I; n=361), ovulatory disorders (group II; n=343); male factor infertility (group III; n=368) and unexplained infertility (group IV; n=170). Ovarian hyperstimulation was done using controlled ovarian hyperstimulation by pure follicle stimulating hormone and /or human menopausal gonadotropins. Ovarian response was monitored by transvaginal ultrasonography. 10,000 IU of human chorionic gonadotropin (hCG) was given when dominant follicle reached maturity. A single IUI was performed 36 hours after hCG administration. IUI was performed with husband’s semen. The cumulative pregnancy rate per cycle as well as the miscarriage rate for each group was determined. Multiple logistic regression analysis was performed to control for age, type and duration of infertility.

Results: The mean age was 31.9 ±5.4 years; the mean duration of infertility was 3.09 ±1.7 years. All treatment groups were comparable in demographic and infertility characteristics. The pregnancy rates per cycle in groups I, II, III, IV were 13.9%, 22.2%, 16.6% and 18% respectively (p<0.001). The miscarriage rates in groups I, II, III and IV were 30.7%, 10.5%, 12.5 % and 18.5 % respectively (p<0.001).

Conclusion: Patients with endometriosis have a significantly reduced pregnancy rate and increased miscarriage rate per cycle when compared to other infertility disorders. Treatment of these patients by IUI should include counseling about the reduced chances of pregnancy and the increased risk of miscarriage.

Financial Support: None.

<table>
<thead>
<tr>
<th>Group I</th>
<th>Group II</th>
<th>Group III</th>
<th>Group IV</th>
<th>p-value</th>
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</thead>
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<tr>
<td>Pregnancy rate %</td>
<td>13.9%</td>
<td>22.2%</td>
<td>16.6%</td>
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<tr>
<td>Miscarriage rate %</td>
<td>30.7%</td>
<td>10.5%</td>
<td>12.5%</td>
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Author Disclosure Block:  G.K. Mansour, None;  T. Falcone, None;  R. Mahfouz, None;  J.M. Goldberg, None;  R.K. Sharma, None;  A. Agarwal, None.

Category (Complete):  Endometriosis (GPC)
Topic (Complete):
  Topic : Assisted reproductive technology

Additional Information (Complete):
  Presenting Author Fellow : No
  In-Training Awards for Research : True
  ACCME Disclosure : I will not be discussing non-FDA approved products
  I agree : True

Status:  Complete
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