TABLE 2. IVF stimulation, oocyte and embryo outcome data in standard and prolonged course of luteal estradiol

<table>
<thead>
<tr>
<th>IVF stimulation, oocyte and embryo outcome data</th>
<th>Stimulation started on day 3 of next cycle</th>
<th>Stimulation started on day 3-7 of next cycle</th>
<th>p-valuea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of stimulation (days)</td>
<td>11.61 ± 2.12 (n=308)</td>
<td>11.33 ± 2.11 (n=68)</td>
<td>NS</td>
</tr>
<tr>
<td>Total gonadotropin dose (IU)</td>
<td>132.58 ± 187.51 (n=308)</td>
<td>154.31 ± 351.50 (n=415)</td>
<td>NS</td>
</tr>
<tr>
<td>Follicle count at test ultrasound</td>
<td>12.77 ± 6.93 (n=209)</td>
<td>9.36 ± 5.49 (n=158)</td>
<td>0.04</td>
</tr>
<tr>
<td>Retrieved oocyte count</td>
<td>10.39 ± 6.64 (n=209)</td>
<td>9.36 ± 5.64 (n=158)</td>
<td>0.04</td>
</tr>
<tr>
<td>Normalized follicle count</td>
<td>7.35 ± 5.44 (n=209)</td>
<td>7.03 ± 5.50 (n=158)</td>
<td>0.59</td>
</tr>
<tr>
<td>Normalized follicle count</td>
<td>6.74 ± 5.38 (n=209)</td>
<td>6.30 ± 5.38 (n=158)</td>
<td>0.32</td>
</tr>
<tr>
<td>Pregnanate rate (%)</td>
<td>38.86 ± 27.50 (n=209)</td>
<td>57.58 ± 28.56 (n=158)</td>
<td>NS</td>
</tr>
<tr>
<td>Frozen embryos</td>
<td>1.98 ± 1.16 (n=209)</td>
<td>1.88 ± 1.15 (n=158)</td>
<td>NS</td>
</tr>
<tr>
<td>Multiple pregnancy (%)</td>
<td>0.89 ± 0.20 (n=209)</td>
<td>0.80 ± 0.17 (n=158)</td>
<td>NS</td>
</tr>
</tbody>
</table>

a Chi-squared and/or Fisher’s exact tests. 95 % CI.

DISCUSSION

- Hypothesis: a long course of 4 mg oral 17β-E2 daily in IVF cycles with gonadotropin did not affect IVF outcomes.
- A significant difference was observed for the mean follicle count at last ultrasound and consequently the mean mature oocyte count, the mean normally fertilized oocyte count and the mean normally fertilized oocyte count in favor of the control group. A prolonged course of 17β-E2 may have a negative effect on follicular recruitment.
- An absence of difference was found for the mean number of transferred embryos and the mean number of frozen embryos created through IVF cycles. A prolonged course of 17β-E2 did not alter embryo outcomes.

A significant difference in clinical pregnancy rate in all cycles and in cycles with transfer confirmed that stimulation started later in subsequent cycle combined with a prolonged course of luteal estradiol should be avoided.

- A trend in favor of the stimulation started on day 3 of subsequent cycle for positive β-hCG test rate and for implantation rate in all cycles was noted.
- A lea graph demonstrated a gradual diminution of the positive β-hCG test rate and clinical pregnancy rate through time, the further the stimulation was started in subsequent cycle. These outcomes reached their paroxysm in cases when stimulation was started on day 1 of next cycle.
- Results confirmed that a prolonged course of estradiol 17β had a significant negative impact on clinical pregnancy rates.

While luteal estradiol permits coordination of IVF cycles and homogenization of follicular recruitment, controlled ovarian hyperstimulation must be started soon in such protocol to maintain IVF success rates.

REFERENCES