Study the relationship between the immune of reproductive tract and corpus luteum local cell insufficiency for patients of infertility

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To investigate the relationship between the immune of reproductive tract and corpus luteum local cell insufficiency for patients of infertility. Methods: The study included 21 cases of patients diagnosed with luteal insufficiency (Luteal phase deficiency, LPD) as study group, and 18 cases of healthy people were as the control group, using radioimmunoassay (Radiation immunity analysis, RIA) on interleukin two in serum, ovulation in cervical mucus beta (IL-1) and tumor necrosis factor alpha (TNF-alpha) were detected by using expression; chemiluminescence immunoassay analyzer were used for detection of two groups of luteal phase serum progesterone levels. Results: The level of serum progesterone in luteal phase, study group was significantly higher than the control group, the difference was significant ($P<0.05$); the ovulation period, research group IL-1 beta and alpha level of serum TNF- were $(0.153 \pm 0.053)$ g/L, $(0.562 \pm 0.178)$ g/L, the control group $(0.141 \pm 0.045)$ u g/L, $(0.656 \pm 0.184)$ g/L, there was no significant difference $(P>0.05)$; the ovulation period, research group IL-1 beta and alpha in cervical mucus TNF- levels were $(1.545 \pm 0.542)$ and $(2.451 \pm 0.685)$, control group $(1.257 \pm 0.274)$ and $(1.897 \pm 0.464)$, differences there was significant $(P<0.05)$; there is a negative correlation of serum progesterone level in cervical mucus interim study group IL-1 beta and TNF-alpha level and corpus luteum ($r = -0.888$, $P<0.05$; $r = -0.849$, $P<0.05$); there is a positive correlation of cervical mucus IL-1 levels and TNF- levels ($r = 0.797$, $P<0.05$). Conclusion: The local cellular immune in reproductive tract of ovulation activated may be one of the main factors for LPD patients with infertility, also can indirectly influence the development of corpus luteum, which can produce LPD.

[KEY WORDS] Interleukin-1; Tumor necrosis factor alpha; Local cellular immune of reproductive tract; Corpus luteum insufficiency; Relationship