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## Leukemia inhibiting factor expression (LIF) in the endometrium of fertile and infertile women throughout different menstrual phases

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LIF derives has been described as a pleiotropic cytokine with effect on the growth promotion and cell differentiation of different types of target cells, with influence on bone metabolism, embryogenesis and inflammation. P53 regulated LIF has been shown to facilitate implantation in the mouse model and possibly in humans. It is suggested that recombinant human LIF might help to improve the implantation rate in women with unexplained infertility.

The aim of this study is to demonstrate the expression of leukemia inhibiting factor in different endometrial locations & compare it in fertile & infertile women.

**Study Design:** Histopathological examination & immunohistochemical expression of Leukemia inhibiting factor (LIF) of endometrial specimens from (25 healthy fertile ladies & 25 cases with unexplained infertility) in different locations within endometrial tissue i.e. luminal, glandular, as well as stromal, was done.

**Results:** In cases of fertility LIF expression varied according to the phase of menstrual cycle. Secretory endometrium expressed significantly higher LIF than proliferative endometrium with maximum expression in the midsecretory phase. In cases of infertility the endometrium showed lower LIF expression during different phases of menstrual cycle in comparison with fertile group.

**Conclusion:** LIF is one of the important cytokines in reproduction & play a role in implantation & supports the endometrial functions. Deregulation of this cytokine may be a cause of unexplained infertility.

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