

Research Article**Efficacy of Levonorgestrel in premenopausal Women for Control of Menstrual Irregularities As Compared To Progesterone**

¹Bushrakant, ²Robinakouser,
³Masoodur Rehman, ⁴Bashir ur Rehman, ⁵MishaAnis and ⁶Sara bashir

¹Ayub Medical College Abbottabad
²Fatimah Jinnah Medical College Lahore
³Wah Medical College WahCantt
⁴King Edward Medical College Lahore
⁵Wah Medical College WahCantt
⁶Fatimah Jinnah Medical College Lahore

ABSTRACT

Objective: Pregnancy can be best prevented through the system of levonorgestrel intrauterine (LNG - IUS), it is also helpful menstrual disturbance treatment. With the combination of estrogen therapy and LNG-IUS a smooth transition can occur in a symptom-free manner to and through menopause. Many of the physicians are unaware of this remedy that can benefit in peri-, pre- and postmenopausal in ladies through combined hormonal therapy. **Design and Method:** This research is based on the long-term experience of clinical profession administrating LNG-IUS in ladies. In the study a total of 104 ladies were traced from pre-menopause to menopausal and then into post-menopause. With the help of patch or gel supplemental 17 was administrated to all these women. It was also applied to some of the ladies through estradiol valerate or orally. At the interval of five years' patients were treated with 1 – 2 separate insertions. Adverse effects due to the factor of estrogen deprivation such as osteoporosis, cardiovascular disease, climacteric signs and other were the combined, accepted and continued regime for the treatment of estrogen deprivation. **Results:** Range of the age varied from the age of 28 – 58 years; whereas, the average age as calculated was forty-eight years. The duration ranged from 80 – 161 months; whereas, an average duration was calculated as 137 months of application. Low rate of LNG-IUS reasons and tolerated number of removal in LND-IUS was observed in Femilis. With zero expulsions LNG-IUS retained in the uterine cavity was observed. During the course of research study seven women ended follow-up. A total of 86 (82%) women chose to replace LNG-IUS five years due to expiration and estrogen therapy was also continued.

Conclusion: A combination of intrauterine progestogen delivery for the suppression of endometrial and estrogen therapy is very practical in women for symptomatic premenopausal. Its practicality benefits in the prevention of any residual hyperplasia, menorrhagia treatment and endometrial proliferation. In the persistent risk and contraceptive effect of unplanned pregnancy in women, locally administrated LNG becomes highly desirable. In the light of these facts; according to author this routine is very safe, accepted, effective and results in high rate of compliance by the patients. There is a need of the dissemination of this awareness in women and practitioners.

Keywords: Contraception, LNG-IUS, EPT, perimenopause and menopausal transition.

INTRODUCTION

There are evidences of change of mood, change in the sleep pattern, sleep disturbances, menstrual regulations and hot flashes in many of

the women before the act of menopause. There is a possibility of preceding hot flashes before the disturbances of menstrual (Costanian, Edgell,

Ardern, & Tamim, 2018). Because of decreased luteal progesterone production often association of heavy bleeding is reported in women between the variables of fluctuating estrogen and individual patients, this may also lead to an ovulatory cycle (Monteiro, Queirós, Lopes, Pedro, & Macedo, 2018). Numerous routines of hormone have been tried to alleviate or treat disturbance with oral contraceptive and regimens, it is indicated in contradiction in more than forty women. In the persistent risk and contraceptive effect of unplanned pregnancy in women, locally administrated LNG becomes highly desirable (Martínez-Domínguez et al., 2018). Numerous reviews and articles have forced the benefits those are non-contraceptive for the administration of intrauterine levonorgestrel application. LNG local treatment attracts due to its simple, long-lasting, less exposed and tolerated administration through intrauterine levonorgestrel (BURKHARDT & BYERS-CONNOR, 2018).

During the research we noticed the use of Femilis intrauterine levonorgestrel and estrogen supplements by 104 women. These women used LNG-IUS for menopause transition for more than ten years. After being expires of five years' patients replaced the IUD with new device insertion for the continuous hormonal treatment (Cardinali, 2018).

METHOD

In the research participation of women was 558 in number. The participation was contraceptive long-term and controlled in nature and included all those women administrated with LNG-IUS (Hapgood, Kaushic, & Hel, 2018). Women developed with climacteric signs with premenopausal were 104 in number, for the relief of their symptoms estrogen supplement was prescribed to these women. Brief detail of the research in the contraceptive Femilis with safety and efficiency is also described at some other place (Lako et al., 2018). Women included in the research were mostly administrated 17 b-estradiol of percutaneous and daily 1.5mg or valerate

estradiol orally or the similar dose oral or patch on regular basis (Njawaya et al., 2018). A six to twelve months' follow-up was also ensured in these women. At the expiration of LNG-IUS there was an option for the women to choose new LNG-IUS for another five years or they may quit the administration of estrogen-progestogen (EPT) (Kavle & Landry, 2018).

RESULTS

Table-I reflects the average age factor for the first insertion of LNG-IUS and its duration of its routine and for combined or 1st and 2nd insertion of LNG as well.

Out of 104 women included in the research all were administrated for LNG second time. Eighty-six (82%) of the women also continued the insertion of LNG for the third consecutive time. And also continue the use this routine as reflected in Figure-I. Seven out of total strength left the follow-up and few other were removed LNG due to numerous reasons such as area change from one place to another, another doctor's administration, hysterectomy due to fibromyoma and breast cancer as shown in Table-II.

DISCUSSION

Numerous reports on the use and administration of LNG specially in premenopausal ladies have been published. Regimen ensures the satisfaction in the control of symptoms and also avoids unplanned pregnancy with the estrogen application in women for climacteric symptoms relief and increasing the excellence of life (Bromfield, Rizo, & Ibrahim, 2018b).

Stromadecausalization, atrophy and heavy suppression drive the local administration of LNG-IUS in women. Gynecologist often complain about frequent bleeding during premenopause and enhanced bleeding as the women reach menopause (Bromfield, Rizo, & Ibrahim, 2018a). Dysfunctional bleeding of uterine can be treated with LNG administration even in the state of menorrhagia. In the fifty percent of women of pre-menopausal corpus

Latium causes dysfunctionality of uterine bleeding,

among these fifty percent of women uterine pathology significance can be observed(Deutsch, Cholkeri-Singh, & Miller, 2018). Typical and non-atypical hyperlexias are often attributed to premenopausal women can best be treated with LNG administration(Kagan & Rivera, 2018). Application of LNG is also considered superior to the oral progestogen for the same condition treatment. The combination of both estrogen supplement and LNG can benefit in the handling of intrauterine. In most of the cases it can also replace the requirement of hysterectomy(Steller & Miller, 2018).

At present, oral estrogen-progestogen combination is available in variety. Pre-menstrual problems such as nausea, fatigue, sleepiness, headache and change in mood attribute many issues in combined therapy of estrogen, progestogen or progestogen induced pre-menstrual(Woodfield, 2018). Metabolic changes are also linked with the estrogen-progestogens of oral nature; it is confirmed in the research held by WHI. There is an essential effect of anti-estrogenic due to progestogens counteracting the positive results of co-administered estrogens(Yang, 2017). Adverse alteration of arterial physiology due to the cardioprotective actions is the principal concern on duration induced method of dose administration by progestogens(Yalamanchi, Fesseha, & Dobs, 2017).

There are substantial positive results are attributed to intrauterine route as it aids in the provision of regular endometrial protection in the treatment of heavy or erratic simultaneous bleeding without any sign of systemic progestogen(Avula, Noonavath, & Wan, 2017). Hormonal side-effects can best be avoided by a method of non-systemic progestogen. This will ultimately enhance the utilization of this technique in large number of women(Nie et al., 2017).

It will also benefit in the long run for various health benefits over the conventional practices as presented in Table-I.

Characteristics of the patients as age, duration of administration till second removal of LNG and

menopausal/pre-menopausal in the phase of EPT are included in Table-I.

	Age (years)	Duration of use (months)
Average	48	137
Range	28-58	80-161

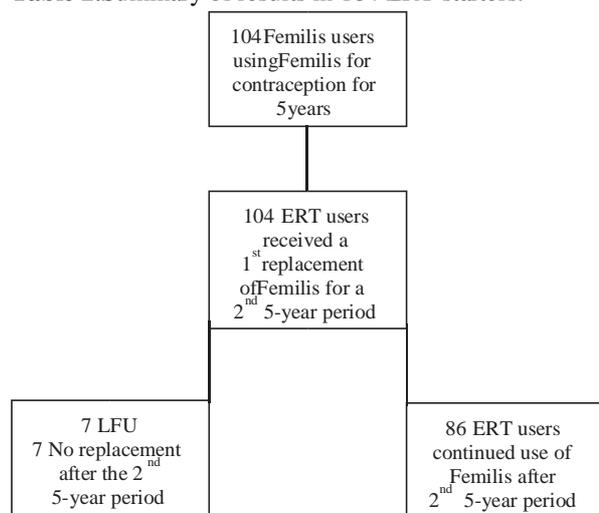


Figure 1. Femilis 60 LNG-IUS is loaded with 60mg of LNG.

Reports show that continuous or sequential regimens, progestogen/estrogen combinations and breakthrough or erratic bleeding are found up to sixty-four percent, contributing as the major cause for the discontinuation in thirty percent of the women.

Primarily, women willing for the insertion of LNG were included in the research study as contraceptive technique. With the passage of time menopausal related symptoms developed.

Table 2. Summary of results in 104 ERT starters.



Foundations of systemic estrogen supplements and climacteric signs of pre-menopausal LNG-

IUS+ET were laid. In number of women complaints were addressed through the implementation of this combined therapy. Easy insertion was made after the expiry of first insertion (five years' expiry duration) of LNG in women being administered for the second or even third time. Almost eighty-two percent of the women opted for the consecutive third insertion after every five years of expiry of first administration. Women were confident and satisfied for the regular use of LNG as it cured the disturbances related to menopausal of menstrual. New LNG was not administered in seven percent of the women as they left the follow-up. It can be calculated from the above said that the acceptance rate of this regimen is high and significant.

Small size of the research study was its obvious limitation. On the contrary a large number of women supported and desired for the regular continuation of this regimen.

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