Results

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This study included thirty women complained of refractory menorrhagia and satisfyied all the selection criteria. All patients gave a written consent for LNG-IUS insertion agreement.

Twenty seven of thirty women underwent technically successful LNG-IUS insertion without cervical dilation while three cases needed cervical dilation with usage of analgesia.

Six cases of thirty underwent hysterectomy after usage of LNG-IUS for 12 months due to the persistence of menorrhagia.

Table(1) shows : Baseline demographic and clinical characteristics of women actually included in the study.

Table (2) shows : Estimation of menstrual blood loss by PBLAC before and after LNG-IUS insertion.

Table (3) shows : Blood hemoglobin level before and after LNG-IUS insertion.

Table (4) shows : Correlation between PBLAC and hemoglobin level after 12 months of LNG-IUS insertion.

Table (5) shows : Patient satisfaction and symptom evaluation after 12 months of LNG-IUS insertion.

Table (6) shows : Sequel after LNG-IUS insertion.

Table (1): Baseline demographic and clinical characteristics of women actually included in the study.

Demographic and clinical characteristics	Mean ± SD (n=30)
Age (year)	40.3 ± 2.13
Gravidity	5.1 ± 1.21
Parity	4.3 ± 1.12
Menstrual blood loss measured by PBLAC	185.3 ± 15.5
Baseline hemoglobin level (g/dl)	8.8 ± 0.59

SD = Standard deviation

g= gram

dl = deciliter n = number of cases.

Table (2): Estimation of menstrual blood loss by PBLAC before and after LNG-IUS insertion

	Follow up interval / Statistical data	Baseline n=30	3 months after LNG IUS insertion n=30	6 months after LNG IUS insertion n=26	12 months after LNG IUS insertion n= 24
Menstrual blood loss measured by PBLAC	Mean ± SD	185 ± 15.5	**94.3 + 10.31**	59.3 ± 8.17	33.45 ± 7.5
	P value		< 0.05	< 0.01	< 0.01
	Percentage of reduction				
	Range		37 – 54%	63 – 72%	78 – 87%
	Average		49.3%	67.9%	83.1%

The table small shows that, PBLAC indicated highly significant reduction in menstrual blood loss from a baseline mean of 185 ± 15.5 to 33.45 ± 7.5 after 12 months ($p < 0.01$). the average reduction in MBL was 83.1% after one year of LNG-IUS insertion.

Table (3): Blood hemoglobin level before and after LNG-IUS insertion.

Follow up interval / Measurement parameter	Baseline n=30	3 months after LNG IUS n=30	6 months after LNG IUS n=26	12 months after LNG IUS n= 24
Blood hemoglobin level (g/dl)	8.8±0.59	10.31 ± 0.81 (p < 0.01)	11.2 ± 0.75 (p < 0.01)	11.9 ± 0.311 (P < 0.01)

The table shows that, the mean hemoglobin values significantly increased as early as 3 months after LNG-IUS insertion from a baseline mean 8.8±0.59 gm/dl to 10.31 ± 0.81 gm/dl at 3 months (p <0.01) and remained significantly higher than baseline at 6 and 12 months after LNG-IUS insertion.

Table (4): Correlation between PBLAC and hemoglobin level after 12 months of LNG-IUS insertion.

Parameter	PBLAC total score correlation coefficient	P value
Hemoglobin level	- 0.893	(< 0.05)

The table shows that there was statistically significant negative correlation between PBLAC and hemoglobin level ($p < 0.05$).

Table (5): Patient satisfaction and symptom evaluation after 12 months of LNG-IUS insertion

State of satisfaction	Menstrual state	Incidence	Total
Satisfied	Eumenorrhea	4 (13.33%)	80%
	Hypomenorrhea	17 (56.66%)	
	Amemorrhea	3 (10%)	
Dissatisfied	Menorrhagia	6 (20%)	20%

The table shows that after 12 months of LNG-IUS insertion 80% of patients were satisfied while 20% of patients were dissatisfied as regard menstrual blood loss.

Table (6) : Sequel after LNG-IUS insertion.

Sequel	Incidence (n= 30)
Irregular vaginal bleeding (1^{st} 3 months)	(18/30) 60%
Expulsion	(1/30) 3.3%
Hysterectomy	(6/30) 20%

Due to persistent menorrhagia ,six cases underwent hysterectomy after 12 months of LNG-IUS.