Results

Forty women diagnosed as cases of dysfunctional menorrhagia and satisfying criteria of dysfunctional type of dysfunctional menorrhagia were involved in this study.

The present work was performed on patients recruited from the out patient gynecologic clinic of Benha university hospital and El-Amrea central hospital during the period from May 2004 to December 2005.

After initial clinical and ultrasound examination women were divided to two groups :

- Misoprostol group as -group I
- Placebo group as -group Π.

Table (1): Comparison of clinical variables between women who received Misoprostol or placebo (mean ±SD).

	Misoprostol group(20)	Control group(20)	t	P
Age (years)	33.65±7.45	31.65±5.63	0.96	>0.05
Gravidity	3.10 ± 2.12	2.98 ± 2.11 .	0.18	>0.05
Parity	3.10 ± 2.12	2.98 ± 2.11 .	0.18	>0.05
Weight (kgm)	69.99±13.55	67.76±13.65	0.52	>0.05

Kgm= kilogram

Table (1) shows that there is non significant difference between the two study groups concerning age, gravidity, parity and weight.

Table (2) Comparison of the haemoglobin before and after menses among the Misoprostol study group (means ± SD)

HAEMOGLIN%	BEFORE menses χ^- ±SD(gm/dL)		AFTER menses X^- ±SD(gm/dL)		χ^- ±SD OF THE DIFFERENCE	PAIRED t TEST	P VALUE
Basal cycle	12.28±1.33		11.29±0.36		0.99±0.20	8.93	<0.01
1ST Misoprostol cycle	12.66±1.44		11.47±0.13		1.29±0.40	1.89	>0.05
2ND Misoprostol cycle	12.34±1.45		11.55±0.38		0.79±0.30	1.77	>0.05
	$t_{1=}$0.87	P>0.05	$t_{1=}$2.10	P<0.05			
	t_2=0.14	P>0.05	T_2=2.22	P<0.05			
	t_3=0.70	P>0.05	T_3=0.89	P>0.05			

- Statistical significance(P<0.05).
- Highly statistically significante(P<0.01).

t_1=Basal cycle versus 1ST Misoprostol cycle
t_2=Basal cycle versus 2nd misoprostol cycle
t_3=1st versus 2nd Misoprostol cycle

Table (2) shows highly significant reduction of hemoglobin in the basal cycle but non-significant reduction in 1st and 2nd misoprostol cycles. Significant reduction between basal and 1st misoprostol cycle, basal and 2nd misoprostol cycle, and non-significant between 1st and 2nd misoprostol cycles.

Table(3) Comparison of Haematocrit before and after menses according to different cycles among the Misoprostol study group(means ± SD)

HAEMATOCRIT E	BEFORE menses χ^{-} ±SD		AFTER menses X^{-} ±SD		χ^{-} ±SD OF THE DIFFERENCE	PAIRED t TEST	P VALUE
Basal cycle	39.75±4.18		36.29±4.53		1.97±1.1	7.89	<0.001
1ST Misoprostol cycle	37.81±4.54		36.38±0.83		1.43±0.9	1.98	>0.05
2ND Misoprostol cycle	38.76±4.55		35.97±1.67		2.79±1.7	1.84	>0.05
	t_1=1.41	P>0.05	t_1=2.34	P<0.05			
	t_2=0.72	P>0.05	t_2=2.61	P<0.05			
	t_3=0.66	P>0.05	t_3=0.98	P>0.05			

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

t_1=Basal cycle versus 1ST Misoprostol cycle
t_2=Basal cycle versus 2nd misoprostol cycle
t_3=1st versus 2nd Misoprostol cycle.

Table (3) shows highly significant reduction of hematocrite in the basal cycle but non-significant reduction in 1st and 2nd misoprostol cycles. Significant reduction between basal and 1st misoprostol cycle, basal and 2nd misoprostol cycle ,but non-significant reduction between 1st and 2nd misoprostol cycles was also noted.

Table (4) Comparison of the number of menses days according to different cycles among the Misoprostol study group(means ± SD).

No of menses days / Cycle	$\bar{\chi}$ ± SD	t	P value
Basal cycle	5.67 ± 0.09	t1 = 6.91	<0.001
1st Misoprostol cycle	3.98 ± 1.09	t2 = 7.68	<0.001
2nd Misoprostol cycle	3.74 ± 1.12	t3 = 0.69	>0.05

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

t1= basal V versus 1st Misoprostol cycle.
t2= basal versus 2nd Misoprostol cycle.
t3= 1st versus 2nd Misoprostol cycles.

Table (4) shows highly significant reduction of menstrual cycle days between basal and 1st misoprostol cycle, basal and 2nd misoprostol cycle ,and non significant reduction between 1st and 2nd misoprostol cycles.

Table (5) Comparison of the estimated blood loss according to different cycles among the Misoprostol study group(means ± SD).

Estimated blood loss / Cycle	$\bar{\chi}$ ± SD	t	P value	Average %change
Basal cycle	233.43 ± 51.7	t1 = 3.92	<0.001	A_1=- 23.58
1st Misoprostol cycle	178.38 ± 35.64	t2 = 6.23	<0.001	A_2=-36.36
2nd Misoprostol cycle	148.54 ± 32.21	t3 = 2.78	<0.01	A_3=-16.73

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

t1= basal versus 1st Misoprostol cycle.
t2= basal versus 2nd Misoprostol cycle.
t3= 1st versus 2nd Misoprostol cycles.

A_1= average between basal versus 1st Misoprostol cycle
A_2= average between basal versus 2nd Misoprostol cycle
A_3= average between 1st versus 2nd Misoprostol cycles

Table (5) show highly significant reduction of EBL between basal and 1st misoprostol cycle, basal and 2nd misoprostol cycle, and 1st and 2nd misoprostol cycles.

Table (6) Comparison of the Pictorial blood loss assessment chart (PBLAC)according to different cycles among the Misoprostol study group(means ± SD).

PBLAC / Cycle	$\bar{\chi}$ ± SD	t	P value	Average change
Basal cycle	157.5±27.57	t1 = 13.92	<0.001	A_1=-36.50
1st Misoprostol cycle	100.01± 7.07	t2 = 21.96	<0.001	A_2=-53.96
2nd Misoprostol cycle	72.50 ± 2.88	t3 = 16.11	<0.001	A_3=-27.50

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

t1= basal versus 1st Misoprostol cycle.
t2= basal versus 2nd Misoprostol cycle.
t3= 1st versus 2nd Misoprostol cycles.

A_1= average between basal versus 1st Misoprostol cycle
A_2= average between basal versus 2nd Misoprostol cycle
A_3= average between 1st versus 2nd Misoprostol cycles

Table (6) show highly significant reduction of PBLAC between basal and 1st misoprostol cycle, basal and 2nd misoprostol cycle ,and highly significant reduction between 1st and 2nd misoprostol cycles.

Table (7) Comparison of the haemoglobin before and after menses among the placebo study group (means ± SD).

HAEMOGLIN%	BEFORE menses $\bar{\chi}$ ±SD(gm/dL)		AFTER menses $\bar{\chi}$ ±SD(gm/dL)		$\bar{\chi}$ ±SD OF THE DIFFERENCE	PAIRED t TEST	P VALUE
Basal cycle	12.71±1.22		11.83±1.21		0.88±0.15	26.22	<0.001
1ST placebo cycle	12.41±1.37		12.59±1.29		0.18±0.12	6.71	<0.001
2ND placebo cycle	12.21±1.26		11.98±1.31		0.23±0.2	5.14	<0.001
	$T_{1=}$0.73	P>0.05	$t_{1=}$2.01	P>0.05			
	T_2=1.28	P>0.05	t_2=0.39	P>0.05			
	T_3=0.48	P>0.05	t_3=1.48	P>0.05			

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

t_1=Basal cycle versus 1ST placebo cycle
t_2=Basal cycle versus 2nd placebo cycle
t_3=1st versus 2nd placebo cycle

Table (7) show highly significant change(decrease in haemoglobin indicating high blood loss) of hemoglobin in the basal cycle, 1st and 2nd placebo cycles. Non significant reduction between basal and 1st placebo cycle, basal and 2nd placebo cycle ,and 1st and 2nd placebo cycles.

Table(8) Comparison of Haematocrit before and after menses according to different cycles among the placebo study group(means ± SD).

HAEMATOCRITE	BEFORE menses $\bar{\chi}$ ±SD		AFTER menses $\bar{\chi}$ ±SD		$\bar{\chi}$ ±SD OF THE DIFFERENCE	PAIRED t TEST	P VALUE
Basal cycle	39.77±3.39		37.8±4.31		1.97±1.1	8.01	<0.001
1ST placebo cycle	37.80±4.31		36.69±4.02		1.11±0.6	8.27	<0.001
2ND placebo cycle	36.89±4.02		35.96±4.42		0.93±0.4	10.39	<0.001
	t_1=1.61	P>0.05	t_1=0.84	P>0.05			
	t_2=2.45	P>0.05	t_2=1.33	P>0.05			
	t_3=0.69	P>0.05	t_3=0.55	P>0.05			

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

t_1=Basal cycle versus 1ST placebo cycle
t_2=Basal cycle versus 2nd placebo cycle
t_3=1st versus 2nd placebo cycle.

Table (8) shows highly significant reduction of hematocrite in the basal cycle, in 1st and 2nd placebo cycles. Non significant reduction between basal and 1st placebo cycle, basal and 2nd placebo cycle ,and 1st and 2nd placebo cycles was also noted.

Table (9) Comparison of the number of menses days according to different cycles among the placebo study group(means ± SD).

No of menses days / Cycle	$\bar{\chi}$ ± SD	t	P value
Basal cycle	5.87 ± 1.03	t1 = 0.53	>0.05
1st placebo cycle	5.67 ± 1.33	t2 = 0.73	>0.05
2nd placebo cycle	5.61 ± 1.22	t3 = 0.15	>0.05

- Statistical significance (P<0.05).
- Highly statistically significant (P<0.01).

t1= basal versus 1st placebo cycle.
t2= basal versus 2nd placebo cycle.
t3= 1st versus 2nd placebo cycles.

Table (9) show non significant reduction of menstrual cycle days between basal and 1st placebo cycle, basal and 2nd placebo cycle ,and non significant reduction between 1st and 2nd placebo cycles.

Table (10) Comparison of the estimated blood loss according to different cycles among the placebo study group(means ± SD).

Estimated blood loss / Cycle	$\bar{\chi}$ ± SD	t	P value	Average change
Basal cycle	230.28 ± 87.21	t1 = 0.38	>0.05	A_1=+4.67
1st placebo cycle	241.05 ± 91.52	t2 = 0.64	>0.05	A_2=+7.48
2nd placebo cycle	247.51 ± 84.19	t3 = 0.23	>0.05	A_3=+2.68

- Statistical significance (P<0.05).
- Highly statistically significant(P<0.01).

t1= basal versus 1st placebo cycle.
t2= basal versus 2nd placebo cycle.
t3= 1st versus 2nd placebo cycles.

A_1= average between basal versus 1st Misoprostol cycle
A_2= average between basal versus 2nd Misoprostol cycle
A_3= average between 1st versus 2nd Misoprostol cycles

Table (10) shows non significant reduction of EBL between basal and 1st placebo cycle, basal and 2nd placebo cycle ,and 1st and 2nd placebo cycles.

Table (11) Comparison of the Pictorial blood loss assessment chart (PBLAC) according to different cycles among the placebo study group(means ± SD).

PBLAC / Cycle	$\bar{\chi}$ ± SD	t	P value	Average change
Basal cycle	172.28±19.64	t1 = 1.93	>0.05	A_1=+5.83
1st placebo cycle	182.32 ± 12.53	t2 = 1.89	>0.05	A_2=+8.39
2nd placebo cycle	186.74 ±28.07	t3 = 0.64	>0.05	A_3=+2.42

- Statistical significance (P<0.05).
- Highly statistically significant (P<0.01).

t1= basal versus 1st placebo cycle.
t2= basal versus 2nd placebo cycle.
t3= 1st versus 2nd placebo cycles.

A_1= average between basal versus 1st Misoprostol cycle
A_2= average between basal versus 2nd Misoprostol cycle
A_3= average between 1st versus 2nd Misoprostol cycles

Table (11) shows non significant reduction of PBLAC between basal and 1st placebo cycle, basal and 2nd placebo cycle ,and non significant reduction between 1st and 2nd placebo cycles.

Table (12) Comparison of basal cycle of 1st gruop versus basal cycle of 2nd group in Haemoglobin, HaematocriteNumber of menses days, Estimated blood loss , estimation of blood loss by Pictorial blood loss assessment chart (mean ± SD).

Cycle / Variable	Misoprostol basal cycle n=20 $\bar{\chi}$ ± SD	Placebo basal cycle n= 20 $\bar{\chi}$ ± SD	t	P
1-Haemoglobin				
before	12.28 ± 1.33	12.71 ± 1.22	t=1.07	P>0.05
after	11.29 ± 0.36	11.83 ±1.21	t=1.91	P>0.05
2-Haematocit				
before	39.78 ± 3.39	39.77 ± 3.39	t=0.01	P>0.05
after	37.29 ± 4.53	37 ± 4.31	t=0.36	P>0.05
3-No of menstrual cycle days	5.67 ± 0.09	5.87 ± 1.03	t=0.87	P>0.05
3-Estimated blood loss	233.43 ± 51.7	230.28 ± 87.21	0.14	P>0.05
5-PBLAC	157.50 ± 27.57	172.28 ± 19.64	1.95	P>0.05

- Statistical significance (P<0.05).
- Highly statistically significant (P<0.01).

Table (12) shows that when comparing misoprostol(1st group)basal cycle and placebo(2nd group)basal cycle there was non significant difference before or after the cycle. Non-significant hemoglobin, hematocrite level before and after basal cycle , number cycle days, EBL, PBLAC.

Table (13) Comparison of Haemoglobin, Haematocrite, Number of menses days, Estimated blood loss , estimation of blood loss by Pictorial blood loss assessment chart before and after treatment(drug versus placebo study group) of the 1st treatment cycle (mean ± SD).

Cycle / Variable	1st misoprostol group I n=20 $\bar{\chi}$ ± SD	1st placebo group I I n=20 $\bar{\chi}$ ± SD	t	P
1-Haemoglobin				
Before	12.66 ± 1.44	12.41 ± 1.37	0.56	>0.05
After	11.47 ± 0.13	12.59 ± 1.29	2.50	<0.05
2-Haematocit				
Before	37.81 ± 4.54	37.80 ± 4.31	>0.007	>0.05
After	36.38 ± 0.83	36.69 ± 4.02	>0.22	>0.05
3-No of menstrual cycle days	3.98 ± 1.09	5.67 ± 1.33	4.39	<0.01
4-Estimated blood loss	178.38 ± 35.64	241.05 ± 91.52	2.85	<0.05
5-PBLAC	100.00 ± 7.07	182.32 ± 12.53	25.56	<0.01

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

Table (13) shows that when comparing misoprostol and placebo in 1st treatment cycle there was non-significant difference before the cycle but statistically different hemoglobin after the 1st treatment cycle was noted. Non-significant hematocrite level before and after treatment between misoprostol and placebo 1st treatment cycle was noted. Highly significant difference between number of menstrual cycle days between misoprostol and placebo was noted. Also there was significant difference between both groups in EBL and highly significant difference in PBLAC between both groups in 1st treatment cycle.

Table (14) Comparison of Haemoglobin, Haematocrite, Number of menses days, Estimated blood loss , estimation of blood loss by Pictorial blood loss assessment chart before and after treatment(drug versus placebo study group) of the 2nd treatment cycle (mean ± SD).

Cycle / Variable	2nd misoprostol group I n=20 $\bar{\chi}$ ± SD	2nd placebo group I I n=20 $\bar{\chi}$ ± SD	t	P
1-Haemoglobin				
Before	12.34 ± 1.45	12.21 ± 1.26	0.30	>0.05
After	11.55 ± 0.38	12.98 ± 1.31	2.94	<0.05
2-Haematocit				
Before	38.76 ± 4.55	36.89 ± 4.02	>1.38	>0.05
After	35.97 ± 1.67	35.96 ± 4.42	>0.007	>0.05
3-No of menstrual cycle days	3.74 ± 1.12	5.61 ± 1.22	5.05	<0.01
4-Estimated blood loss	148.54 ± 32.21	247.51 ± 84.19	4.91	<0.01
5-PBLAC	72.50 ± 2.88	186.74 ± 28.07	18.10	<0.01

- Statistical significance (P<0.05).
- Highly statistically significante(P<0.01).

Table (14) shows that when comparing misoprostol and placebo in 2nd treatment cycle there was non significant difference before the cycle but statistically different hemoglobin after the 2nd treatment cycle was noted. Non-significant hematocrite level before and after treatment between misoprostol and placebo 2nd treatment cycle was noted. Highly significant difference between number of menstrual cycle days between misoprostol and placebo was noted. Also there was highly significant difference between both groups in EBL and highly significant difference in PBLAC between both groups in 2nd treatment cycle.