



Impact Of Medical And Surgical Management On Ovarian Reserve In Women With Endometriosis As Measured By Anti-Mullerian Hormone (AMH) And Inhibin B



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OBGECTIVE

To assess the impact of medical and surgical treatment on ovarian reserve in women with endometriosis as assessed by Anti-Mullerian Hormone (AMH) and Inhibin B (IB) levels.

DESIGN

Prospective observational case-control study of women treated with endometriosis medically and surgically in a tertiary care center in Oman.

METHODS

From April 2021 to June 2023, women referred to gynecologic clinic with suspected endometriosis were invited to participate with an informed consent. They underwent AMH, IB and cycle day 2-4 FSH at entry (T0). They were managed as per standards of care and as agreed between the woman and her treating team. Serum IB and AMH were then repeated at 4 (T1) and 12 (T2) weeks from the start of the medical therapy or post-operatively if underwent surgery for endometriosis.

RESULTS

Table 1: Comparison between two type of management groups in baseline and 12 weeks in IB, AMH and FSH

	Medical Management 28/51 Mean ± SD	Surgical management 23/51 Mean ± SD	Confidence interval (CI)	P Value
Inhibin B pre-treatment	91.04 ± 89.57	47.89 ± 46.14	1.689-84.623	0.042
Inhibin B 12 weeks from treatment	39.21 ± 42.4991	28.804 ± 29.6995	-10.68-31.5036	0.326
AMH pre-treatment	20.565±16.8399	14.5123± 2.850	– 2.780-14.884	0.175
AMH 12 weeks from treatment	18.939 ± 15.2780	11.5026 ± 11.635	-0.346-15.219	0.061
FSH pre-treatment	7.030 ± 3.34	14.5123± 2.850	-2.220-2.479	0.912
FSH 12 weeks from treatment	7.346 ± 3.614	6.257 ± 3.510	– 0.928- 3.107	0.283

RESULTS

60 women were consented for the study of whom 9 were excluded due to incomplete laboratory results. Of the total 51 women included , 28 (54.9%) were managed medically (the control group) and 23 (45.1%) women were managed surgically (comparison group). The age range was 19-49 years for both with a mean of 29.86 ±6.88 for medical group and 33.17 ±8.31 for the surgical group(P-value 0.125 , CI -7.59-0.95). The measured results as in table 1

CONCLUSION

Women undergoing surgery for endometriosis started with lower AMH and IB levels, likely because surgery is performed after they failed medical management or had more severe disease. It was reassuring to see that surgery did not result in a more significant drop in AMH. However, a greater drop in IB was observed in the medical group, highlighting the need to investigate the effect of medical management on different markers of ovarian reserve and whether this suppression caused by medical therapy is reversible.