

### Introduction

Endometriosis is a progressive condition beginning in adolescence with high recurrence despite surgery. Post-operative hormonal therapy induces a hypoestrogenic state which theoretically can reduce recurrence and improve quality of life.

### Objectives

This study analyses a larger patient sample by combining data from similar retrospective studies to address small sample size on postoperative hormonal therapy in adolescents, particularly its efficacy in terms of recurrence.

### Methods

**Data search:** Extensive search on PUBMED, MEDLINE and other databases using specific keywords. **Data Extraction:** The studies were appraised using inclusion, exclusion criteria. Four studies were chosen and were analysed using the GRACE checklist. **Data Analysis:** The chosen p-value was  $\alpha < 0.05$ . Data was first analysed using F-test for equal variances and then one tailed t-test to identify a statistical difference.

### Results

Recurrence of disease was reported in 25 patients (35.21%) out of 71 patients managed with surgical treatment only as compared to 40 patients (27.97%) out of 143 patients who received surgery followed by hormonal treatment (p=0.454). Despite having more percentage of early-stage disease patients in surgery only group, there was overall a higher proportion of recurrence rate in surgery only group indicating trend of benefit with postoperative hormonal therapy but did not demonstrate statistical difference in reduction of endometriosis recurrence.

### Conclusion

There was no statistically significant difference observed in the reduction of endometriosis recurrence with postoperative hormonal therapy. There is an urgent need for longitudinal data collection and long-term follow up of adolescent with endometriosis to determine the most effective treatment.

### Acknowledgement and References

Yeung P Jr, Sinervo K, Winer W. et al. (2011). Complete laparoscopic excision of endometriosis in teenagers: is postoperative hormonal suppression necessary? *Fertil Steril*, 95(6), 1909-1912.  
Tandoi I, Somigliana E et al. (2011) High rate of endometriosis recurrence in young Women. *J Pediatr Adolesc Gynecol*, 24(6), 376-379.  
Yang Y, Wang Y et al. (2012). Adolescent endometriosis in China: a retrospective analysis of 63 cases. *J Pediatr Adolesc. Gynecol.*, 25(5), 295-299.  
Lee S, Kim M et al. (2017). Recurrence of ovarian Endometrioma in adolescents after conservative laparoscopic cyst enucleation. *J Pediatr Adolesc Gynecol*, 30, 228-233.

	Surgical treatment only (% patients)	Surgery followed by hormonal treatment. (% patients)	P value	t-crit	t-stat
Stage I + II	24	11.2	0.467	1.94	-0.0870
Stage III + IV	76	88.8	0.467	1.94	0.0870
Recurrence	35.21	27.97	0.454	1.94	0.120

Table 8 – Comparison of stage of endometriosis based on rASRM classification and recurrence percentage with surgery only and surgery followed by hormonal treatment.