

## Introduction

Diagnostic and therapeutic laparoscopy is a common day-stay procedure in gynaecology. There is limited data on recovery following gynaecological laparoscopy, and the counselling patients receive about recovery time is not evidence based.

## Objective

To compare pain and its impact on Activities of Daily living (ADLs) following diagnostic and therapeutic day-stay gynaecological laparoscopy, to enable improved education on postoperative expectations.

## Methods

A cohort of 159 participants undergoing day-stay gynaecological laparoscopy were recruited in a Melbourne-based hospital setting. Women were classified as therapeutic (n=102) if they underwent any form of therapeutic surgical intervention or diagnostic (n=27) if they underwent laparoscopy  $\pm$  dye studies. Procedure stratification is outlined in Table 1.

Procedure	Number of Cases (n)
<b>Diagnostic</b>	<b>27</b>
Hysteroscopy, dilatation and curettage $\pm$ dye studies <sup>^</sup>	29 (100%)
<b>Therapeutic</b>	<b>102</b>
Excision of endometriosis	84 (65%)
Salpingectomy	16 (12%)
Cystectomy/Excision of endometrioma/Ovarian drilling	20 (15%)
Polypectomy	2 (0.01%)
Myomectomy	3 (0.02%)
Sterilization	2 (0.01%)
Adhesiolysis	2 (0.01%)
Oophorectomy	1 (<0.01%)

**Table 1. Procedure Stratification**

Patients recorded pain scores and analgesia requirements from postoperative days 1 to 7. Pain scores corresponded to impact on ADLs (refer Table 2). Statistics were performed using a paired statistical t-test.

Rank	Description of Pain
1	Minimal description (does not impact ADLs)
2	Mild discomfort (noticeable but does not impact ADLs)
3	Moderate discomfort (noticeable to the point it may impact ADLs)
4	Severe discomfort (noticeable discomfort that may cause a person to modify ADLs)
5	Unbearable discomfort (unable to perform any ADLs and is bedbound)

## Results

Majority of women experienced post-operative abdominal pain. Shoulder pain affected more therapeutic than diagnostic participants (80% vs 59%) (refer Table 3).

Site	All (n=129)	Diagnostic (n=27)	Therapeutic (n=102)
Abdomen	128 (99%)	27 (93%)	102 (100%)
Shoulder	94 (73%)	16 (59%)	81(80%)

**Table 3. Site of pain**

Abdominal pain moderately impacted ADLs in all patients. Shoulder pain was worse post-therapeutic procedures however it had minimal impact on ADLs. (refer Table 4)

Site	All (pain score [ $\pm$ SD]) (n=129)	Diagnostic (pain score [ $\pm$ SD]) (n=27)	Therapeutic (pain score [ $\pm$ SD]) (n=102)	p Value
Abdomen	3.12 (2.91 - 3.32)	1.26 (0.65 - 1.87)	3.12 (2.91 - 3.32)	0.48
Shoulder	2.16 (1.89 - 2.45)	1.41 (0.76 - 2.06)	2.16 (1.89 - 2.45)	<b>0.04</b>

**Table 4. Severity of pain**

Shoulder pain lasted significantly longer (3.18 vs 1.86 days,  $p=0.01$ )(refer Table 5) for therapeutic procedures. For all procedures mean return to ADLs and employment was 5.38 days ( $p=0.09$ ) and 7.89 days ( $p=0.19$ ) respectively (refer Table 6).

	All (mean days [ $\pm$ SD]) (n=129)	Diagnostic (mean days [ $\pm$ SD]) (n=27)	Operative (mean days [ $\pm$ SD]) (n=102)	p Value
Abdomen	5.03 (4.57 - 5.47)	4.32 (3.40 - 5.25)	5.23 (4.71 - 5.74)	0.12
Shoulder	2.89 (2.48 - 3.30)	1.86 (1.03 - 2.68)	3.18 (2.72 - 3.64)	<b>0.01</b>

**Table 5. Mean days to resolution of pain**

	All (mean days [ $\pm$ SD]) (n=129)	Diagnostic (mean days [ $\pm$ SD]) (n=27)	Operative (mean days [ $\pm$ SD]) (n=102)	p Value
ADLs	5.38 (5.01 - 5.76)	4.75 (3.97 - 5.53)	5.56 (5.14 - 5.98)	0.09
Employment	7.89 (7.12 - 8.67)	7.00 (5.57 - 8.43)	8.27 (7.34 - 9.20)	0.19

**Table 6. Days to return to ADL**

Mean days requiring any analgesia was 3.55 ( $p=0.13$ ). Mean days requiring opiate analgesia was 1.60 ( $p=0.99$ ).

## Discussion and Conclusion

Pain following therapeutic and diagnostic day-stay gynaecological laparoscopy has comparable effect on ADLs, return to employment and analgesia requirements.

### Acknowledgements

This work was supported by Epworth Freemasons East Melbourne and The University of Melbourne Parkville Australia..