



# A Comparison of Safety and Efficacy in Surgical versus Radiological Treatment of Symptomatic Fibroids

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## Introduction

- Hysterectomy has been the established treatment for women with symptomatic fibroids. However, alternative forms of treatment are considered in situations where uterine preservation is preferred.
- Abdominal and Laparoscopic myomectomy (AM and LM, respectively), as well as uterine artery embolisation (UAE), are viable options for symptomatic control.

**Objective:** To review the outcomes of surgical (AM,LM) versus radiological treatment (UAE) for management of symptomatic fibroids from 2008 to 2016 in a tertiary academic centre. This data will contribute to understanding the safety and efficacy of UAE.

## Methods

- Patients undergoing elective surgery (AM and LM) for removal of fibroids were identified using the dedicated gynecological surgery database
- Patients undergoing UAE were identified through a separate database kept by the radiology department
- Main outcome measures were operative time, hospital stay, readmission rate, complications, and requirement for further surgical treatment.
- Any missing details were extracted from the electronic patient record.
- STATA Software was used for all statistical analyses

## Results

- 158 treated women were identified.
- 26% of women were referrals from outside of ADHB
- Patients were not demographically similar among the groups, differing on age and maximum diameter of fibroids.
- There were no recorded cases of uterine rupture or deaths as a result of post operative complications

Surgical Outcomes	Abdominal	Laparoscopic	UAE	P
Surgical Time (hours)	1.41 (1.15, 1.8)	2.46 (1.46, 3.2)	1.25 (1.08, 1.50)	<sup>†</sup> 0.0001
Blood transfusion rate (%)	8.2%	0%	1.3%	<sup>†</sup> 0.07
Length of Stay (hours)*	77.0 (59.4, 99.9)	52.7 (35.7, 55.7)	34.34 (27.9, 50.15)	<sup>†</sup> 0.0001
Major Post Operative Complication rate (%)	1.6%	5.3%	3.8%	
Readmission rates (%)	8.2%	21.8%	7.7%	<sup>†</sup> 0.19
Ongoing followup for symptoms at 6 months (%)	15.8%	14.7%	12.8%	<sup>†</sup> 0.9
Underwent TAH post initial procedure	0%	5.3%	7.7%	<sup>†</sup> 0.09
Post Embolisation Syndrome	n/a	n/a	11%	

\*MEDIAN (P25,P75)      <sup>†</sup>Kruskal Wallis rank sum test      <sup>†</sup>Pearson’s  $\chi^2$  test

- UAE had the shortest mean operative time compared to LM.
- The length of stay was longest in the AM group.
- Major Post operative complications all occurred during hospital stay.
- Readmission rate was highest with LM. Whereas among UAE and AM, cases were comparable.
- The rate of post embolisation syndrome at ADHB is higher than reported in literature (9%)

Patient Demographics	Abdominal (n=61)	Laparoscopic (n=19)	UAE (n=78)	P <sup>†</sup>
Age	37.3 (6.0)	38.9 (7.6)	42.4(6.0)	0.000
BMI	25.0 (4.7)	24.5 (3.8)	27.6(18.3)	0.30
Maximum diameter of fibroids	9.8 (3.4)	7.0 (2.8)	8.5 (3.0)	0.002

<sup>†</sup>MEAN (SD)      <sup>†</sup>two way analysis of variance (ANOVA)

## Conclusions

- UAE at ADHB is a safe medium term option for managing symptomatic fibroids.
- Side effects and the possibility off further treatment should be anticipated when considering this treatment option.
- Further large scale studies would be required to compare UAE with established treatments in regards to long term outcomes.

## References

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