

Patient Baseline Characteristics and Satisfaction Following Treatment for Uterine Fibroids

Nabiya Syeda, Mr Thomas Sewell, Mr Stephen Quinn
Imperial College NHS Foundation Trust

Introduction

Uterine fibroids are **benign** tumours that arise from the myometrium.

70-80% of women are affected by the time they reach menopause (1).

Around **half** of these women will experience symptoms such as (2)

- heavy menstrual bleeding
- pressure/bloating or pain within the abdomen
- subfertility

Uterine fibroids larger than 3cm which are accompanied by significant symptoms that affect quality of life (QoL), can be treated by Uterine Artery Embolisation (UAE), Myomectomy, or Hysterectomy. Other management options include, medical management, transcervical resection of fibroids (TCRF) or expectant management (EM) (3).

The Uterine Fibroid Symptom and Quality of Life (UFS-QOL) questionnaire produces an objective score of symptom severity and QoL, and is split into the Symptom Severity Score (SSS) and the Health-related QoL (HRQOL) score.

Aim

Studies usually compare just two treatments and so indirect comparisons need to be made to compare multiple treatment options. This can be difficult when studies have different primary outcome measures and length of follow-up.

This study therefore aimed to

- Compare **5 different treatment groups** using the UFS-QOL questionnaire before and after treatment
- Compare **baseline patient characteristics** to identify possible factors in treatment decision

Methods

Patients that attended the Fibroid Clinic at St' Mary's Hospital were recruited from April 2019–April 2022.

Inclusion Criteria:

- Diagnosis of Uterine Fibroids
- Over 18 years old
- Pre-menopausal

The following treatments were studied – TCRF, UAE, Myomectomy, Hysterectomy, and EM. Patients recorded baseline characteristics and UFS-QOL scores **before** primary treatment. Baseline characteristic included age, BMI, ethnicity, pregnancy history, fibroid history and imaging.

Patients were followed up **after treatment** and repeated the same UFS-QOL questionnaire at Year 1 and Years 2 **post-treatment**.

233 patients were recruited. 50 patients were excluded or withdrew from the study. 25 patients were retrospective. 42 patients had incomplete follow up data for **post-treatment** analysis.

Baseline Measurements

165 patients were able to record baseline characteristics.

Patient Characteristics

Myomectomy patients were **younger** and fertility wishes could explain this. Myomectomy, UAE and Hysterectomy **had larger fibroids** than TCRF patients.

UFS-QOL Scores

Symptom Severity Score

Expectant management had **less severe** symptoms than UAE and Hysterectomy but not Myomectomy and TCRF.

No difference was noted between UAE, TCRF, Myomectomy or Hysterectomy patients.

Health-related QoL score

UAE had **lower QoL** compared to Myomectomy.

Results

Differences of UFSQOL scores from Baseline	Expectant Management (N=28)	Transcervical Resection of Fibroids (N=11)	Uterine-Artery Embolisation (N=40)	Myomectomy (N=38)	Hysterectomy (N=6)	P value
Symptom Severity Score						
2 years follow up						
Number of participants	21	2	14	20	3	
Median Difference (IQR)	12.5 (20.3)	-17.2	42.2 (34.4)	28.1 (62.5)	87.5	0.003
Total HRQOL Score						
2 years follow up						
Number of participants	18	2	14	19	2	
Median difference (IQR)	-9.9 (34.1)	22.4	-45.7 (38.8)	-38.8 (44.8)	-61.2	0.006

Table 1 – Magnitude of difference in Symptom Severity and HRQOL scores from baseline scores
Median Difference is the median of baseline score subtracted by follow up score.

Follow-up Symptom Severity Score (SSS)

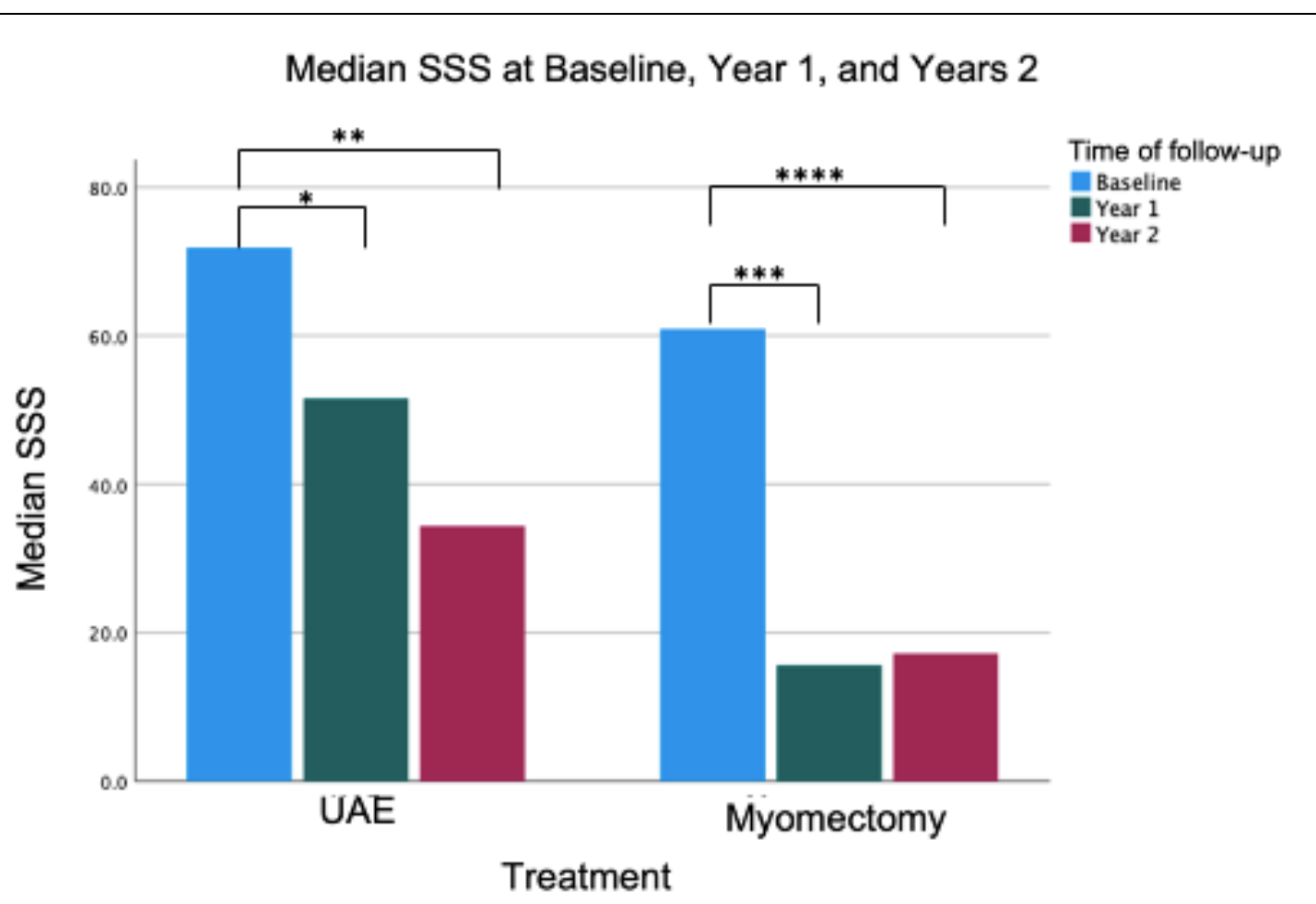


Figure 1a - Median Symptom Severity Score of UAE and Myomectomy at Baseline, Year 1, and Years 2
*p=0.011, **p=0.002

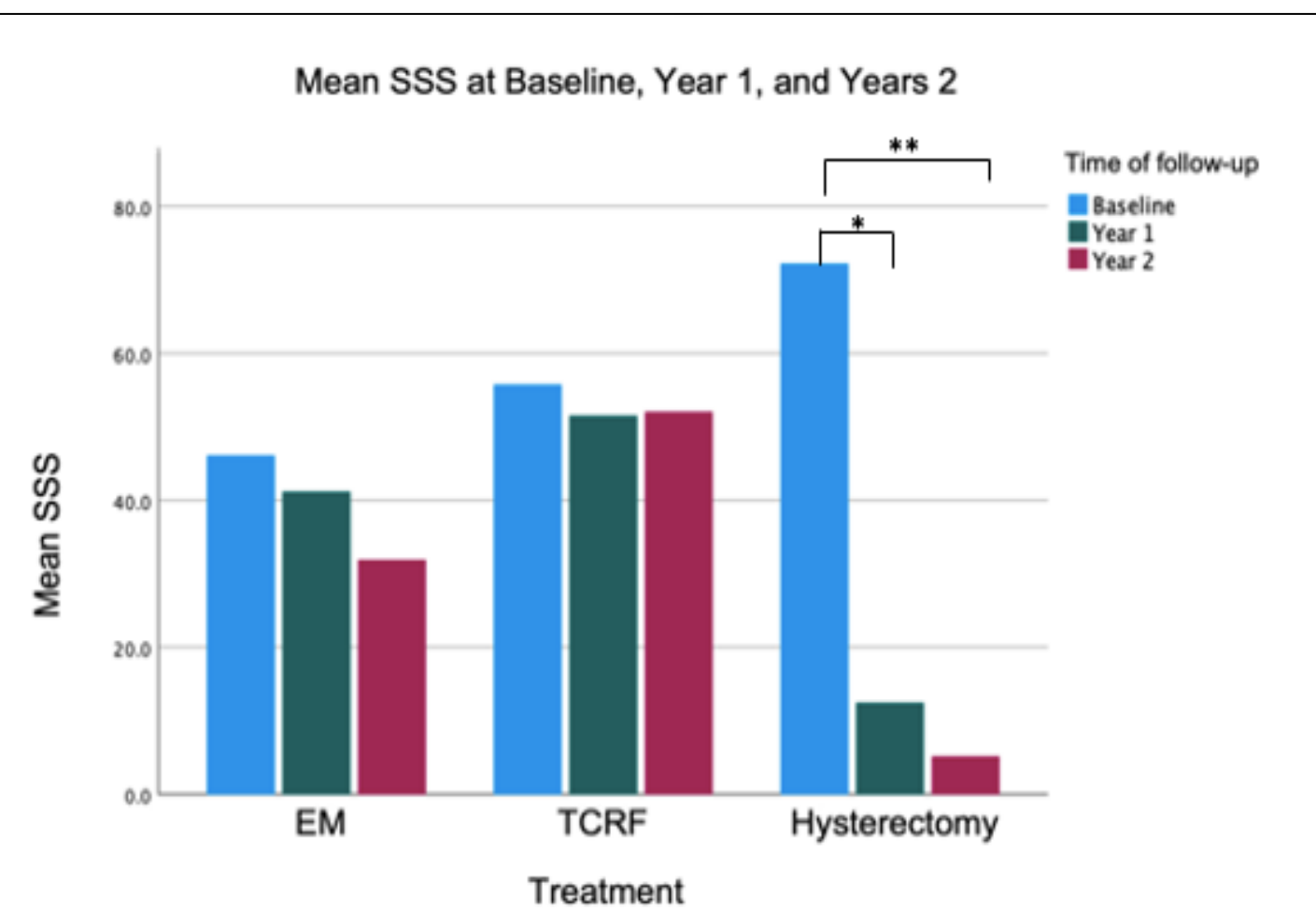


Figure 1b - Mean Symptom Severity Score at of EM, TCRF and Hysterectomy at Baseline, Year 1, and Years 2
*p=0.045, **p<0.001, ***p<0.001, ****p<0.001

Figure 1 - Symptom Severity scores of EM, TCRF, UAE, Myomectomy and Hysterectomy patients following Treatment
A larger symptom severity score indicated more severe symptoms

Follow-up Quality of Life Score (HRQOL)

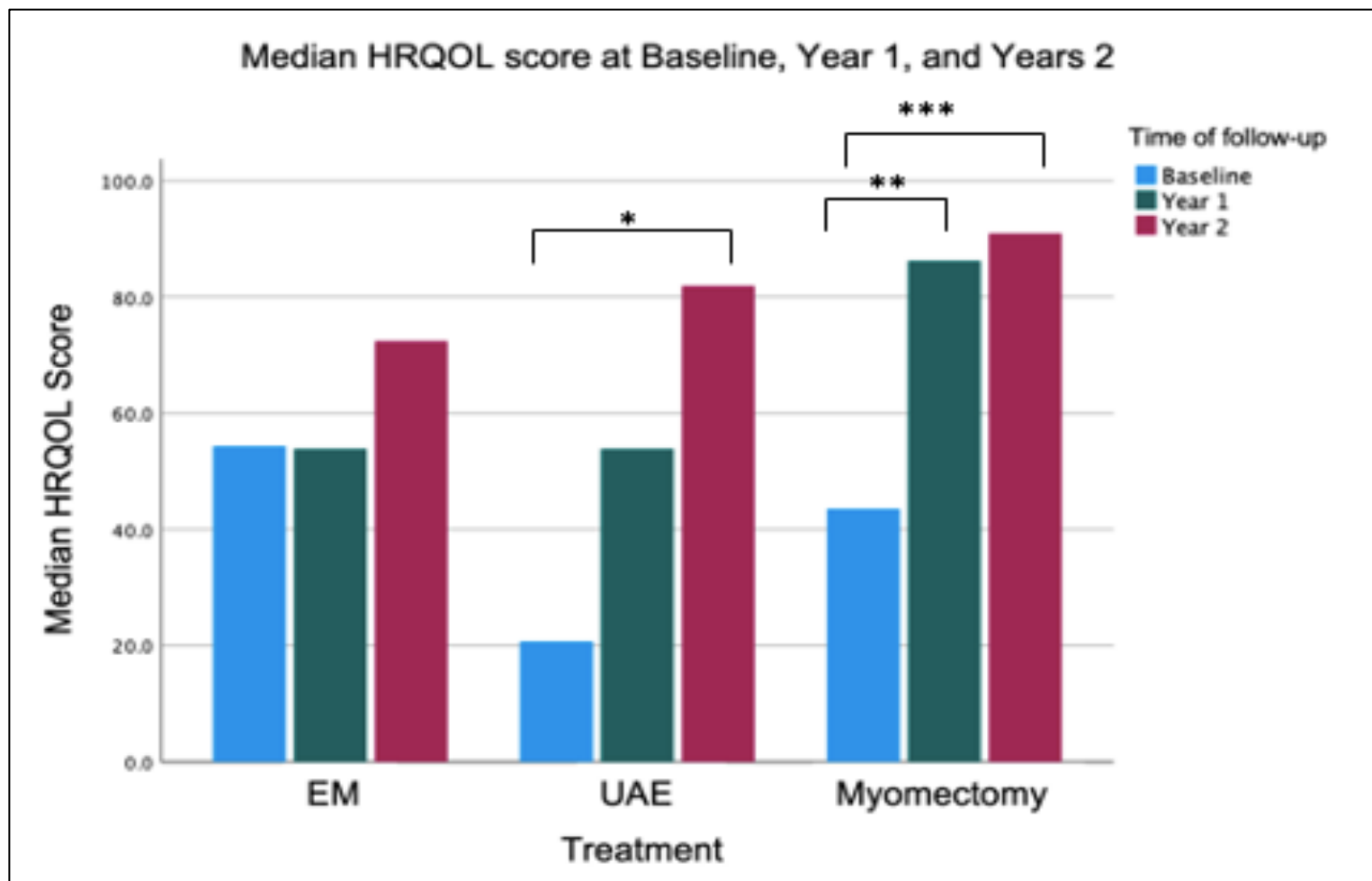


Figure 2a - Median HRQOL score of EM, UAE and Myomectomy at Baseline, Year 1, and Years 2
*p<0.001, **p=0.004, ***p<0.001

Figure 2 - HRQOL Scores of EM, TCRF, UAE, Myomectomy and Hysterectomy patients following treatment
A larger HRQOL score indicates improved QoL.

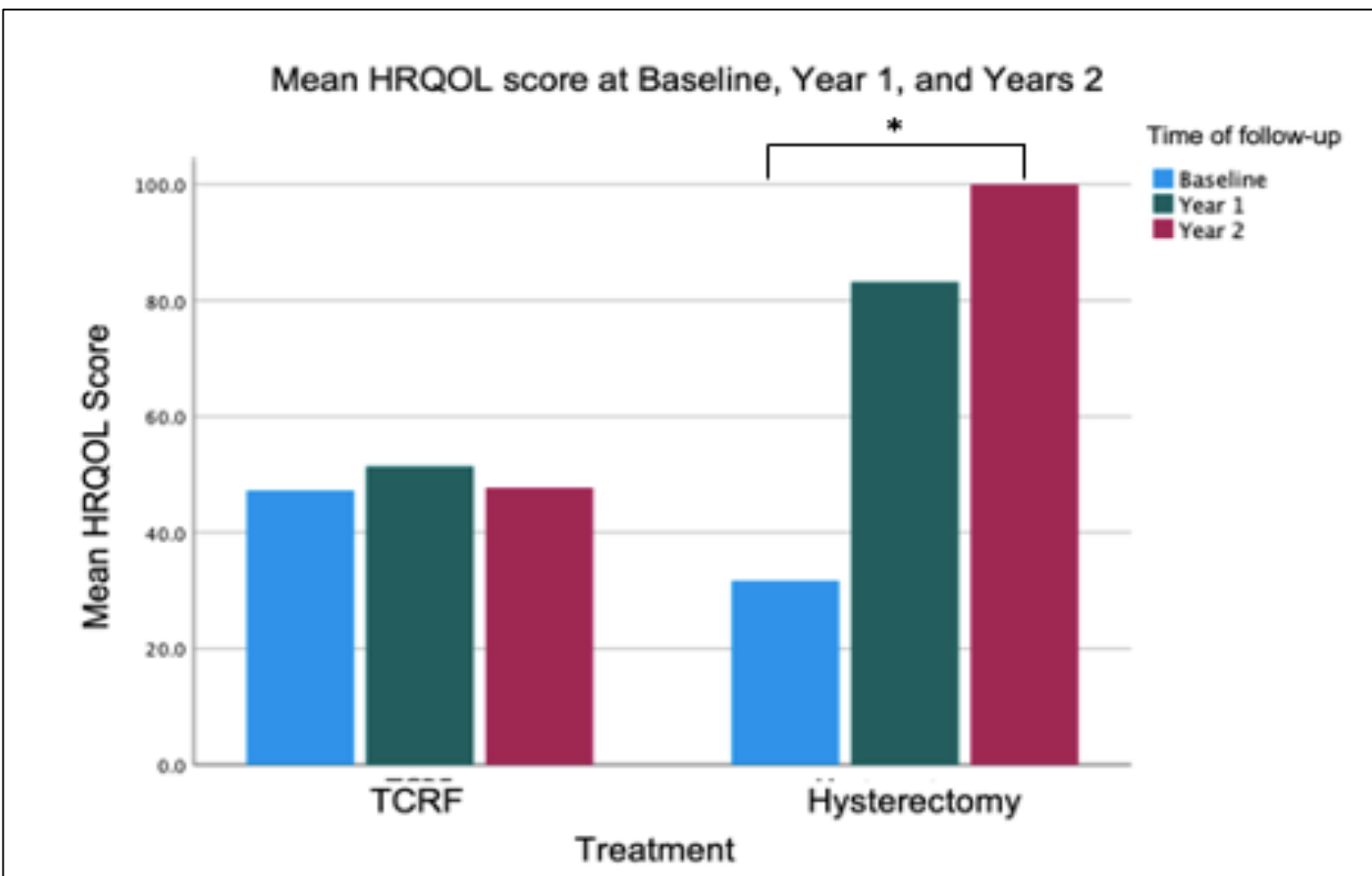


Figure 2b - Mean HRQOL score of TCRF and Hysterectomy at Baseline, Year 1, and Years 2
*p=0.01

Discussion and Conclusions

Symptom Severity Score

UAE, Myomectomy and Hysterectomy were effective options in alleviating symptoms compared to EM and TCRF. Hysterectomy patients saw a greater magnitude of improvement compared to myomectomy patients. This replicates the work of Wallace et al, who reported hysterectomy patients having lower symptom severity scores post-treatment compared to myomectomy patients (4).

By including expectant management in the analysis, this study highlighted further needs to understand patient decisions with regards to treatment choice. These preliminary findings can be strengthened with larger sample sizes and continued follow up. This will offer further insight to clinicians when assessing the many treatments available to patients to ultimately allow for better shared decision making with patients.

Health-related quality of life Score

UAE, Myomectomy and Hysterectomy were more effective options in improving quality of life post-treatment when compared to expectant management and TCRF. However there was no difference in magnitude of improvement between UAE, Myomectomy and Hysterectomy. This relationship was reaching near significance.

1. Amodeo A, Chiu S, Quinn SD. Choice of primary and secondary outcomes in randomised controlled trials evaluating treatment for uterine fibroids: a systematic review. *BJOG: An International Journal of Obstetrics & Gynaecology*. 2022; 129 (3): 345-355. 10.1111/1471-0528.16933.
2. Manyonda I, Belli A, Lumsden M, Moss J, McKinnon W, Middleton LJ, et al. Uterine Artery Embolization or Myomectomy for Uterine Fibroids. *New England Journal of Medicine*. 2020; 383 (5): 440-451. 10.1056/NEJMed1914735.

3. Lumsden MA, Hamoodi J, Gupta J, Hickey M. Fibroids: diagnosis and management. *BMJ (Clinical research ed.)*. 2015; 351 h4887. 10.1136/bmj.h4887.

4. Wallace K, Zhang S, Thomas L, Stewart EA, Nicholson WK, Wegienka GR, et al. Comparative effectiveness of hysterectomy versus myomectomy on one-year health-related quality of life in women with uterine fibroids. *Fertility and Sterility*. 2020; 113 (3): 618-626. 10.1016/j.fertnstert.2019.10.028.