



# UFE is an effective treatment for large fibroids for both bleeding and bulk symptom relief.

## RESULTS

The mean age and pre procedural volume was  $44 \pm 6$  and  $1150 \pm 669$  cm<sup>3</sup>, respectively. At average imaging follow up duration of 15.7-week, mean post procedural uterine volume was  $885 \pm 576$  cm<sup>3</sup>. Mean housefield units (HUs) on pre and post contrast T1 imaging for primary fibroid burden was  $210 \pm 153.5$  and  $412.2 \pm 351.9$ , respectively. Mean ratio of pre to post enhancement HU was  $2.2 \pm 1.5$ . Embospheres (Merit Medical Systems) of size 500-700um and 700-900um were used. An average of 6.9 vials (SD 4.5) were used per patient. The mean reduction in uterine volume was  $30.3\% \pm 15.5\%$ . The number of vials used for embolization was directly correlated to the pre procedure uterine volume ( $p < 0.01$ ).

At mean follow up duration of 18.5-weeks, bleeding symptom relief was achieved in 89.2% of patients and bulk symptom relief was achieved in 73.3% of patients. On multivariate regression analysis, the pre procedural uterine volume was not predictive of the bleeding symptom response ( $p=0.33$ ) for the large fibroids. There was no significant difference between the pre procedural uterine volume of bulk symptom responders and non-responders ( $p=0.41$ ).

Nonvascular minor complications were seen in 7 patients (SIR UFE Reporting Standards). Five patients subsequently underwent surgical intervention (4, laparoscopic hysterectomy and 1, myomectomy). There was no correlation between the preprocedural uterine volume or change in volume following UFE and need for surgical intervention ( $p=0.31$ ).

## CONCLUSIONS

UFE is an effective treatment for large fibroids for both bleeding and bulk symptom relief. The efficacy of bulk symptoms relief is lower than that of bleeding symptoms. Preprocedural uterine volume did not predict the response to bulk symptoms or the need for surgical intervention. The preprocedural uterine volume was directly related to the number of vials of beads used for embolization.

## Efficacy of Uterine Fibroid Embolization (UFE) for Large Fibroids: Clinical Outcome Correlations and Volumetric Changes

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## OBJECTIVE

The aim of this study is to provide a more comprehensive understanding of the volumetric changes and clinical outcomes of uterine fibroid embolization (UFE) as a treatment option for large fibroids. Despite the widespread use of UFE as a minimally invasive treatment for fibroids, there is a lack of robust evidence on the long-term effects of UFE for large fibroids in particular. Therefore, the primary objective of this study is to fill this knowledge gap by evaluating the volumetric changes and clinical outcomes of UFE in a large sample of patients with large fibroids. We hope that the results of this study will contribute to a better understanding of the effectiveness and potential risks of UFE for large fibroids, and provide valuable information for patients and healthcare providers considering this treatment option.

## MATERIALS & METHODS

218 UFE procedures were identified using CPT codes. Large fibroids were defined as more than 10 cm in any single dimension, and 48 cases were selected. Data was obtained from EMR and PACS. Volumetric analysis was done with MIM Software (Cleveland, OH). Statistical analyses were performed using IBM SPSS software (Armonk, NY).