

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20232285>

Original Research Article

## Hysterectomy in uterine fibroids: an institutional survey pre and post COVID lockdown

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**Received:** 31 May 2023

**Revised:** 02 July 2023

**Accepted:** 03 July 2023

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### ABSTRACT

**Background:** The COVID-19 pandemic had a tremendous effect on surgical practice and surgical outcomes, especially in Gynaecology which had led to an increase in operative interferences like hysterectomies, which is one of the most frequently performed surgical procedures for uterine leiomyomas. Aim of this study was to determine the impact of covid lockdown on hysterectomies performed on AUB-L in perimenopausal and post-menopausal women based on clinical, radiological, and operative aspects.

**Methods:** A retrospective study on perimenopausal and post-menopausal women who underwent hysterectomy for AUB-L was compared based on their clinical, radiological, and operative findings in the pre COVID period (April 2019-March 2020) and post COVID lockdown period of one year (July 2021-June 2022), at Department of Obstetrics and Gynaecology, SVS Hospital, Telangana.

**Results:** The post-covid group has a significant increase in the severity of clinical symptoms such as menorrhagia and dysmenorrhea (VMSS-GRADE 2). Radiological findings (US AND MRI)-The size (>5cms) and number (>2) of fibroids increased significantly in post COVID group. The operative duration (1-3hrs), intraoperative blood loss (150-300ml), need for blood transfusion (>24%), postoperative pain (VAS pain score 5), and mean hospital stay (72-120hrs) were significantly increased in the post-COVID group as compared to pre COVID group attributable to delay in seeking medical advice due to COVID-19 lockdown.

**Conclusions:** This study clearly states that the impact of the COVID-19 lockdown was significant in worsening clinical features, increasing the size and number of fibroids which in turn increased the number of hysterectomies, operative time and complications.

**Keywords:** COVID lockdown, Fibroids, Hysterectomy

### INTRODUCTION

Following a number of cases of pneumonia of unknown origin in Hubei province, China, Severe Acute Respiratory Syndrome Coronavirus-type 2 (SARS-CoV-2) was identified as the RNA virus causing 'Coronavirus Disease 2019' (COVID-19). This virus rapidly spread throughout the world and was recently declared a pandemic by the World Health Organization (WHO) on March 11, 2020, impacting many sectors as well as leading to global socio-economic implication.<sup>1-5</sup> The COVID-19 pandemic has

grossly affected the lives of people throughout the world.<sup>6</sup> The Indian Government announced a nationwide lockdown in the initial phase starting from 23rd March 2020 as a preventive step to minimize its spread.<sup>7</sup> Major changes were made in various Government policies especially involving the health system. Though health facilities continued to provide their essential services, elective surgeries had to be curtailed to divert the hospital resources in managing the COVID-19 pandemic. During pandemic, the demand for ventilators, hospital space and personnel was depriving owing to their deviation to the

emergency service. The pandemic effect on surgery were profound, potentially long lasting and extensive. The impact of COVID-19 on surgical practice is widespread ranging from workforce and staffing issues, procedural prioritization, viral transmission risk intraoperatively as well as impact on surgeries. Uterine leiomyomas are the most common pelvic neoplasm in females with an estimated incidence of 20%-40% in reproductive age women.<sup>8,9</sup> They are usually asymptomatic but they do present with symptoms of abnormal uterine bleeding and/or pelvic pain/pressure symptoms. Management includes medical, minimally invasive and surgical methods like myomectomy and hysterectomy. Hysterectomy is one of the most frequently performed surgical procedure after caesarean section.<sup>10</sup> The incidence of hysterectomy in western countries ranges from 10-20%.<sup>11</sup> In India, the prevalence of hysterectomy operation is less than 1% in Northeast India to as high as 23% in Andhra Pradesh mostly from Rural background and performed in private hospitals.<sup>12</sup> Leiomyoma are the primary indication for hysterectomy in the country accounting for 33% to more than 40% of the approx. 6,00,000 hysterectomies each year.<sup>13</sup>

Aim of study was to determine the impact of COVID lockdown on hysterectomies for AUB-L in perimenopausal and postmenopausal women based on clinical, radiological and operative aspects.

**METHODS**

A retrospective study on perimenopausal and postmenopausal women who underwent hysterectomy for AUB-L was compared based on their clinical, radiological

and operative findings in the pre COVID period (April 2019-March 2020) and post COVID lockdown period of one year (July 2021-June 2022) at Department of Gynaecology and Obstetrics, SVS Hospital.

**Inclusion criteria**

All the perimenopausal and postmenopausal women who underwent hysterectomies for AUB-L during the precovid lockdown period of one year (April 2019-March 2020) at tertiary care center were included. All the perimenopausal and postmenopausal women who underwent hysterectomies for AUB-L during the post COVID lockdown period of one year (July 2021-June 2022) at tertiary care center also included as study group.

**Inclusion criteria**

All the perimenopausal and postmenopausal women of AUB-L who underwent medical management, who had undergone myomectomies and other minimally invasive procedures for AUB-L during the study period and all the perimenopausal and postmenopausal women who underwent hysterectomies for other than AUB-L were excluded.

**RESULTS**

In Table 1, we infer that out of all women we studied in the pre and post COVID lockdown period, the postcovid group has a significant increase in the severity of clinical symptoms such as menorrhagia (70%), dysmenorrhea (38.3%), pressure symptoms (30%) and mass per abdomen (20%) as compared to precovid group.

**Table 1: Clinical features of myoma cases.**

Duration	Total number of cases(n)	Dysmenorrhea (VMSS grade -2) (%)	Heavy menstrual bleeding (%)	Pressure symptoms (%)	Mass per abdomen (%)
April 2019-March 2020	120	46 (38.3%)	84 (70)	36 (30)	24 (20)
July 2020-June 2021	188	88 (46.8%)	152 (80)	82 (44)	56 (30)

N=Total no. of cases who underwent hysterectomy for AUB-l

**Table 2: Average size of fibriods.**

Duration	Total number of cases (n)	Small size <3cms (%)	Medium size (3-4.9cms) (%)	Large size (>/=5cms) (%)
April 2019 to March 2020	120	84 (70)	24 (20)	12 (10)
July 2021 to June 2022	188	116 (61.7)	44 (23.4)	28 (14.8)

N=Total no. of cases who underwent hysterectomy for AUB-l

**Table 3: Number of fibriods.**

Duration	Total number of cases (n)	Number of fibriods < / = 2	Number of fibriods > 2
April 2019 to March 2020	120	92 (76.6)	28 (23.)
July 2021 to June 2022	188	140 (74.4)	48 (25.5)

N=Total no. of cases who underwent hysterectomy for AUB-l

Tables 2 and 3 shows radiological findings (US AND MRI) of pre and post covid group. The size (largest  $\geq 5$ cms was 10%) and number ( $>2$  was 23.3%) of fibroids was more in post covid group compared to pre covid group showing us the effect of lockdown which would have had the effect by not able to approach or take medical help in this period. Hysterectomy insights which showed that the

operative duration (1-3hrs), intraoperative blood loss (150-400ml), need for blood transfusion ( $>17\%$ ), postoperative pain (VAS pain score 5), and mean hospital stay (72-120hrs) were significantly increased in the post-covid group as compared to pre covid group attributable to delay in seeking medical advice due to COVID-19 lockdown leading to significant rise in number and size of fibroids as depicted in Table 4.

**Table 4: Hysterectomy insights AUB-L.**

	Total number of cases	Average intra operative duration	Average intra operative blood loss (approx.)	No. of patients requiring blood transfusion	Number of patient requiring additional techniques	Post operative pain (VAS score)	Mean hospital stay
<b>April 2019- June 2020</b>	120	1-2hrs	100-150ml	22	8	3-4	24-72hrs
<b>July 2021- June 2022</b>	188	2-3hrs	150-300ml	46	22	5-6	72-120hrs

## DISCUSSION

Many women with AUB-L most commonly present to gynaecological services with AUB and associated iron-deficiency anaemia, dysmenorrhea, pressure symptoms and mass per abdomen. For women with uterine fibroids, everyday life is often disrupted and fibroids remain a leading indication for hysterectomy.<sup>14,15</sup> During COVID lockdown, AUB-L individuals were started on medical therapy after imaging investigations and followed up on virtual visits. Elective myomectomies and hysterectomies were deferred temporarily though women with suspected malignancies were taken up for diagnostic procedures and further treatments without delay. A few desperately requiring surgery (hysterectomy) also had to postpone for reducing hospital exposure to a minimum and keeping staff and facilities reserved for COVID emergencies.<sup>16</sup> However, because of the logistical issues and inaccessibility to public transport due to lockdown, several patients avoided seeking medical help and presented with worsening symptoms and clinical manifestations of AUB-L post lockdown, which might have led to an increase in the rate of hysterectomies.

The main limitation of this study was the small data of hysterectomies done for AUB L done in the post covid lockdown in just 1 year and not much of such comparative studies available in this context.

## CONCLUSION

This study clearly states that the impact of COVID-19 lockdown was significant in worsening clinical features, increasing the size and number of fibroids which in turn increased the need for hysterectomies which further lead to an increase in operative time, intraoperative and postoperative complications. This can be attributed to the

prolonged COVID lockdown period when only teleconsultation and medical emergencies were prioritized.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** BhanuRekha S, Sravani C, Akuthota U, Reddy BS, Reddy JL. Hysterectomy in uterine fibroids: an institutional survey pre and post COVID lockdown. *Int J Reprod Contracept Obstet Gynecol* 2023;12:2427-30.