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A Retrospective Observational Study on Evaluation of the Adnexal Masses in Hysterectomised Women: A Retrospective Case Series Study

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Abstract: ***Background**: Gynaecologists routinely encounter adnexal masses after hysterectomy due to a conflicting approach in managing benign entities. These might present challenges during its diagnosis and treatment. **Methods**: Patients presenting with abdominal pain and a history of hysterectomy were consecutively enrolled from a single centre, tertiary care teaching hospital in South India. Data regarding clinical features, radiographic findings, surgical management and histopathological aspects were collected. **Results**: Between January 2023 to January 2025, 12 patients were diagnosed with adnexal masses using ultrasound. Of the 12 patients, 50% were diagnosed with simple cyst and remaining 50% had complex cyst. The most common presenting symptom was abdominal pain for the last 2.5 months, and abnormal uterine bleeding of the leiomyoma type. CA - 125 levels were within normal range and all the patients underwent laparotomy and cystectomy. A follow - up examination at regular interval revealed good recovery and patient outcomes. **Conclusion**: All adnexal masses following hysterectomy were either ovarian or para - ovarian cysts that can be surgically managed.*

Keywords: adnexal masses, hysterectomy, ovarian cyst, Abdominal pain

1. Introduction

Hysterectomies are the most common gynaecological surgeries conducted not only in India, but worldwide,[2] and the majority of these are performed for benign conditions of the uterus.3 While there is no clarity on whether or not adnexal structures are to be retained or removed, adnexal masses are a common reason women require further surgery following hysterectomy, and their frequency is directly proportional to the type of adnexectomy performed. The prevalence of hysterectomy varies across countries and regions, and it is influenced by various factors, including age, parity, socioeconomic status, and access to healthcare. The incidence of developing adnexal masses post - hysterectomy is as high as 50.7%[4, 5], and the incidence of subsequent surgery post - hysterectomy varies from 2.8 – 9.2%[6]. In India, the prevalence of hysterectomy is high, with an estimated 2 million procedures performed annually. The indications for hysterectomy in India are diverse and include benign conditions, such as fibroids and prolapse, as well as gynecological cancers. The present study was conducted to analyze the clinical features, radiological aspects, and the management of adnexal masses post - hysterectomy.

2. Methodology

A retrospective, single - center, case series study was conducted in the Department of Obstetrics and Gyanecology from January 2023 to January 2025. The study was approved by the Institutional Ethical Committee of BGS Global Institute of Medical Sciences, Bangalore. Informed consent was obtained from all the participants. Over 2 years, a total of 12 consecutive cases of adnexal masses were presented. These patients underwent either abdominal or vaginal hysterectomies for benign conditions with one or both adnexa preserved and later presented to the department OPD with a chief complaint of pain in the abdomen. The clinical, pathological, and surgical information related to previous hysterectomy and adnexal pathology was obtained from the patient's medical records. In addition, details on demographic characteristics, clinical examination, presenting symptoms of adnexal pathology, diagnostic investigations such as ultrasound or computed tomography scan, cancer antigen biomarker (CA - 125), the type of surgery, and findings on subsequent follow - up were also recorded. The data was analyzed for descriptive statistics.

3. Results

Over 2 years, 12 multigravida women were diagnosed as having adnexal masses. The mean age at presentation of symptoms was 45.6 years, and all the participants underwent hysterectomy about 7.6 years before presenting with the complaint. All the participants complained of pain in the abdomen. About 25% of participants had co - morbidities, and the most common symptom reported by 75% of participants was abnormal uterine bleeding with fibroids. Palpation of the abdomen revealed a cystic mass in 33.3% of participants. All the participants underwent an ultrasound of the abdomen and pelvis region, and CA - 125 levels were found within normal

levels. About 50% of the participants were diagnosed with ovarian complex cysts, and another 50% were diagnosed with ovarian simple cysts. About 91.7% of participants were treated with laparotomy and cystectomy, and post - op follow - up at 15 days revealed no complaints. Histopathologically, all the adnexal masses were diagnosed a benign cyst.

4. Discussion

Hysterectomy is often the final treatment for the majority of gynaecological problems; however, in the event of retained adnexa after hysterectomy, patients may experience adnexal masses requiring reoperation. In the present study, participants were in the age range of 32 to 61 years, with a mean age of 45.6 years, similar to a study conducted by Sree Gouri et al[7]. About 50% of participants in the present study were in the age group of 41 to 50 years. Sangam et al[8] reported a mean age of 41.3 years, with the majority of patients below 35 years of age, Movva et al[9] reported a mean age of 42.3 years, with 68% of participants in the range of 40 to 50 years, while Oksuzoglu et al[10] reported a mean age of 42.6%. Therefore, it became clear that all patients who underwent hysterectomy and experienced abdominal pain occurred mostly in the 4th decade of life.

All the participants in the present study were multigravida who underwent hysterectomy about 7.4 years before presenting with their chief complaint. It was found that all participants in our study presented with a chief complaint of pain in the abdomen. Sree Gouri et al[7] reported abdominal pain among 68.8% of their participants, whereas 34.9% of participants complained of abdominal pain in a study conducted by Naz et al[11]. In addition, Kanupriya et al reported abdominal pain among 75% of their participants[12]. The median duration of abdominal pain was found to be 2.5 months.

In the present study, we found that 75% of participants who underwent hysterectomy presented with abnormal uterine bleeding due to uterine (AUB) leiomyomas. AUB is irregular uterine bleeding in the absence of identifiable pathology of the pelvis, pregnancy, or other medical conditions[13]. Uterine leiomyomas or uterine fibroids develop in the smooth muscle of the uterus, and AUB are the most common symptoms of leiomyomas[14]. Gul et al in their study reported AUB followed by uterine fibroids as the most common clinical diagnosis for hysterectomy[15]. In the present study, about 25% of participants had comorbidities and a general physical examination revealed that cystic masses were palpated among 33.3% of participants.

In the present study, all the participants were advised to undergo an ultrasound, and about 41.7% of adnexal masses among participants were diagnosed as complex ovarian cysts, 33.3% of adnexal masses were diagnosed as simple ovarian cysts, and the rest were either adnexal cyst, adnexal mass and adnexal complex cysts. It was observed that all the adnexal masses in our study were cystic, and the majority of them were from the ovaries. Similar to our findings, Sree Gouri et al[7] reported that about 72.5% of adnexal masses were of ovarian origin. Gul et al[15] reported that 11.9% of their participants were clinically diagnosed as ovarian cysts, whereas Shiber et al[16] reported about 64.8% of adnexal masses of ovarian origin.

In our study, none of the participants had elevated CA - 125. An elevated CA - 125 associated with a pelvic mass is generally suggestive of ovarian malignancy; nevertheless, other benign conditions associated with pelvic mass might elevate CA - 125. Sri Gouri et al[7] reported about 51% of their participants had elevated CA - 125, whereas Kanupriya et al[12] reported about 61.53% of participants with elevated CA - 125 levels.

All but one participant in our study underwent laparotomy and cystectomy with a good recovery during subsequent follow - ups. One of the participants was on follow - up. None of the participants required any chemotherapy. There were no complications in any patients resulting in mortality and morbidity. The histopathology confirmed the adnexal masses as benign cysts.

Our case series has some limitations. First, due to the retrospective nature of the study, we were not able to collect other essential data, such as the type of hysterectomy and adnexectomy. Second, we did not include women who underwent hysterectomy with salpingectomy.

5. Conclusion

Adnexal masses following hysterectomy are associated with reoperation and are usually manifested as painful masses in the abdomen. All adnexal masses were diagnosed as benign cysts.

References

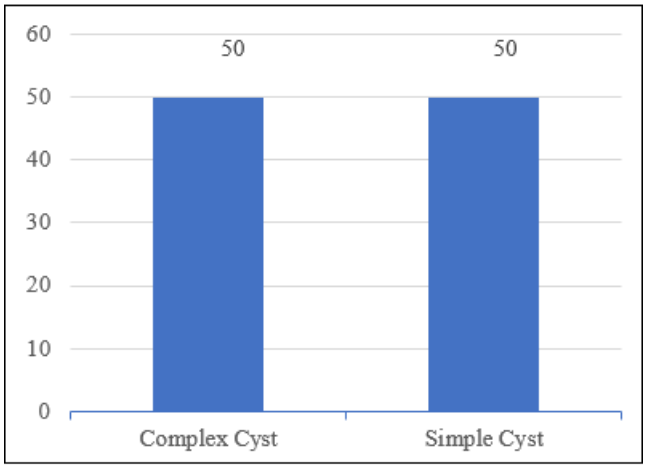
[1] Sharma C, Sharma M, Raina R, Soni A, Chander B, Verma S. Gynecological diseases in rural India: A critical appraisal of indications and route of surgery along with histopathology correlation of 922 women undergoing major gynecological surgery. Journal of mid - life health.2014; 5 (2): 55 - 61.
[2] Hammer A, Rositch AF, Kahlert J, Gravitt PE, Blaakaer J, Søgaard M. Global epidemiology of hysterectomy: possible impact on gynecological cancer rates. American journal of obstetrics and gynecology.2015; 213 (1): 23 - 9.
[3] Perera HK, Ananth CV, Richards CA, Neugut AI, Lewin SN, Lu YS, et al. Variation in ovarian conservation in women undergoing hysterectomy for benign indications. Obstet Gynecol.2013; 121: 717–26.
[4] Chao X, Liu Y, Ji M, Wang S, Shi H, Fan Q, et al. Malignant risk of pelvic mass after hysterectomy for adenomyosis or endometriosis. Medicine.2020; 99 (15): e19712. https: //doi. org/10.1097%2FMD.0000000000019712.
[5] Holub Z, Jandourek M, Jabor A, Kliment L, Wágneroá M. Does hysterectomy without salpingo - oophorectomy influence the reoperation rate for adnexal pathology? A retrospective study. Clinical and Experimental Obstetrics & Gynecology.2000; 27 (2): 109 - 12.
[6] Karp NE, Fenner DE, Burgunder - Zdravkovski L, Morgan DM. Removal of normal ovaries in women

under age 51 at the time of hysterectomy. Am J Obstet Gynecol 2015; 213: 716. e1 - 6.
[7] Sree Gouri SR, Chavali MY, Thunga V, Nallabothula AK. Evaluation of the Adnexal Masses in Hysterectomized Women: An Observational Study. International Journal of Scientific Research in Dental and Medical Sciences.2022; 4 (4): 156 - 161.
[8] Sangam JH, Singh A, Sinha H. Analysis of Adnexal Mass in Women with Previous Hysterectomy - An observational study. Thai Journal of Obstetrics and Gynaecology.2020: 244 - 50.
[9] Movva N, Kavya M. Ovarian Cysts in Post Hysterectomy Cases–An Overview. Sch Int J Obstet Gynec.2021; 4 (5): 182 - 6.
[10] Öksüzoğlu A, Özyer Ş, Yörük Ö, Aksoy RT, Yumuşak ÖH, Evliyaoğlu Ö. Adnexal lesions after hysterectomy: A retrospective observational study. Journal of the Turkish German Gynecological Association.2019; 20 (3): 165 - 9.
[11] Farhat N, Altaf B. Experience with pelvic masses following hysterectomy for benign diseases. Biomedica.2004; 20 (Jul - Dec): 106 - 9.
[12] Kanupriya V, Narula A, Kaur SP, Gupta A, Kaur P, Gupta S. A Case Series on Adnexal Masses in Women from Reproductive to Postmenopausal Age Group in One Year at a Tertiary Care Hospital. International Journal of Pharmaceutical and Clinical Research 2024; 16 (3); 604 - 614.
[13] Ahmed S, Ahmed S, Gullabzada M, Gullabzada U, Jobanputra K. Abnormal Uterine Bleeding With Leiomyomas: A Case Report of Its Natural Course and Therapeutic Management. Cureus.2024 Sep 11; 16 (9): e69153. doi: 10.7759/cureus.69153.
[14] High cumulative incidence of uterine leiomyoma in black and white women: ultrasound evidence. Baird DD, Dunson DB, Hill MC, Cousins D, Schectman JM. Am J Obstet Gynecol.2003; 188: 100–107.
[15] Gul G, Manzoor R, Lone IR. Abnormal uterine bleeding and hysterectomy: Insights from histopathological analysis of hysterectomy specimens from a tertiary care hospital. Indian J Pathol Oncol 2024; 11 (3): 232 - 237.
[16] Shiber LD, Gregory EJ, Gaskins JT, Biscette SM. Adnexal masses requiring reoperation in women with previous hysterectomy with or without adnexectomy. Eur J Obstet Gynecol Reprod Biol.2016; 200: 123–7.

Tables and Figures

Table 1: Demographic characteristics of participants

Age; *mean ± sd*	45.6 ± 8.2
Age groups; *n (%)*	
31 to 40 years	3 (25)
41 to 50 years	6 (50)
More than 51 years	3 (25)
History of Hysterectomy; *n (%)*	12 (100)
Duration; *mean ± sd*	7.4 ± 7.8
Indications; *n (%)*	
AUB - L	9 (75)
AUB - E	2 (16.7)
AUB – A/L	1 (8.3)
Comorbidity; *n (%)*	
Yes	3 (25)
No	9 (75)
Duration of pain (months); Median (IQR)	2.5 (1.0 – 12.0)
Mass on abdominal palpation	
Yes	4 (33.3)
No	8 (66.7)



Graph 1: Diagnosis of adnexal masses after ultrasound

Figure 1: Intra - operative post hysterectomy ovarian cyst