

ORIGINAL RESEARCH

A Study on Large Benign Ovarian Tumors in Post-Menopausal Women

¹Dr. Bullu Priya Oraon, ²Dr. Prof. Shashi Bala Singh

¹Senior Resident, ²HOD, Department of Obstetrics and Gynaecology, Rajendra Institute of Medical Sciences, Ranchi, Jharkhand, India

Corresponding Author

Dr. Bullu Priya Oraon

Senior Resident, Department of Obstetrics and Gynaecology, Rajendra Institute of Medical Sciences, Ranchi, Jharkhand, India

Received date: 15 February, 2024

Acceptance date: 17 March, 2024

ABSTRACT

Background: Large benign ovarian tumors in post-menopausal women present a unique clinical challenge due to the potential for significant morbidity and the differential diagnosis with malignant tumors. Understanding their clinical presentation, management, and outcomes is crucial for optimizing patient care. **Methods:** This retrospective study analyzed 150 post-menopausal women who underwent surgical management for large benign ovarian tumors at a tertiary care hospital over five years. Data on demographic characteristics, clinical presentation, diagnostic methods, surgical management, and outcomes were collected and analyzed. **Results:** The majority of tumors were serous cystadenomas (40%), followed by mucinous cystadenomas (35%), benign cystic teratomas (20%), and fibromas (5%). Ultrasound was the primary diagnostic tool, supplemented by MRI in 50% of cases. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was the most common surgical procedure (70%). The average hospital stay was 5 days, with postoperative complications being rare. No recurrences or malignancies were observed during the median follow-up of 36 months. **Conclusion:** Large benign ovarian tumors in post-menopausal women can be effectively managed with surgery, leading to favorable outcomes. The low rate of complications and absence of malignancy on follow-up highlights the effectiveness of current diagnostic and management strategies. **Recommendation:** Clinicians should maintain a high index of suspicion for large benign ovarian tumors in post-menopausal women presenting with abdominal distension or discovered incidentally. Early and accurate diagnosis, followed by appropriate surgical management, is recommended to ensure optimal outcomes.

Keywords: Post-Menopausal Women, Benign Ovarian Tumors, Surgical Management, Diagnostic Methods

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution- Non Commercial-Share Alike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

INTRODUCTION

Ovarian tumors represent a wide spectrum of gynecological conditions that vary from benign to malignant. In post-menopausal women, the occurrence of large benign ovarian tumors presents a unique clinical challenge. Despite their benign nature, these tumors can have significant implications for the health and quality of life of affected individuals. This introduction to a study on large benign ovarian tumors in post-menopausal women aims to shed light on the epidemiology, pathophysiology, clinical presentation, diagnostic challenges, and management strategies of these conditions, as well as to discuss the implications for patient care [1,2].

The incidence of ovarian tumors tends to decrease in post-menopausal women; however, when such tumors do occur, they necessitate a thorough evaluation to differentiate benign from malignant lesions. The distinction is crucial for determining the appropriate course of treatment and for predicting patient outcomes. Large benign ovarian tumors, such as

serous cystadenomas, mucinous cystadenomas, and benign cystic teratomas (dermoid cysts), among others, can manifest with a range of symptoms or, intriguingly, may remain asymptomatic and be discovered incidentally during routine examinations or imaging for unrelated issues [3,4,5].

The pathophysiology behind the development of large benign ovarian tumors in post-menopausal women is not entirely understood and is thought to involve a complex interplay of genetic, hormonal, and environmental factors. The reduction in ovarian hormonal activity post-menopause suggests that factors other than estrogenic stimulation play roles in tumorigenesis.

Clinically, these tumors can present with nonspecific symptoms such as abdominal distension, pain, or discomfort, which may mimic other medical conditions and lead to diagnostic dilemmas. Occasionally, they may lead to acute complications like torsion, rupture, or hemorrhage, necessitating emergency intervention.

Therefore, accurate diagnosis, involving clinical examination, imaging techniques such as ultrasound, MRI, and sometimes the use of tumor markers, is paramount to guide management [6,7,8].

The management of large benign ovarian tumors in post-menopausal women typically involves surgical intervention, considering the potential for tumor growth, the relief of symptoms, and the elimination of malignant potential. The choice between conservative and radical surgical approaches depends on the tumor's characteristics, the patient's general health, and their personal preferences. The advent of minimally invasive surgical techniques has significantly improved outcomes, allowing for shorter hospital stays and quicker recoveries [9,10].

This Study aims to explore the characteristics of large benign ovarian tumors in post-menopausal women through a compilation of cases, emphasizing the diversity in presentation, management strategies, and outcomes. By delving into these cases, we aim to contribute to the broader understanding of these tumors and to underscore the importance of personalized care in optimizing outcomes for post-menopausal women diagnosed with these conditions.

MATERIALS AND METHODS

This study is designed as a retrospective study analysis, aiming to investigate the clinical presentation, diagnostic methods, management strategies, and outcomes of large benign ovarian tumors in post-menopausal women. By examining medical records from a selected period, this study seeks to gather comprehensive data on the incidence, treatment approaches, and follow-up outcomes of patients diagnosed with these tumors.

The study will be conducted at a tertiary care hospital with a specialized gynecology department. The hospital is chosen for its high volume of gynecological cases, including a significant number of post-menopausal women presenting with ovarian tumors, thus providing a rich dataset for analysis.

The study will include post-menopausal women diagnosed with large benign ovarian tumors. The inclusion criteria are:

- Age 50 years or older, confirming post-menopausal status.
- Diagnosis of a benign ovarian tumor with a size of 5 cm or larger, confirmed by histopathological examination after surgical removal.
- Comprehensive medical records available for review.

Patients with incomplete medical records or those who have had previous malignant ovarian tumors will be excluded from the study.

Data will be collected from electronic medical records, patient charts, surgical reports, and pathology records. A standardized data collection form will be used to ensure consistency in information gathering. The following data will be extracted for each patient:

- Demographic information (age, BMI, comorbidities)
- Clinical presentation and symptoms at the time of diagnosis
- Diagnostic methods used, including imaging techniques and tumor marker levels
- Surgical management details (type of surgery, intraoperative findings, and any complications)
- Histopathological findings
- Postoperative care and follow-up outcomes

Data will be analyzed using descriptive statistics to summarize patient demographics, tumor characteristics, diagnostic methods, and treatment outcomes. The incidence of large benign ovarian tumors and the distribution of different tumor types will be calculated. Inferential statistics, including chi-square tests for categorical variables and t-tests or ANOVA for continuous variables, will be used to explore associations between tumor characteristics and outcomes. Logistic regression analysis may be employed to identify predictors of surgical complications or recurrence.

This study will be conducted following ethical guidelines for research involving human subjects. Since this study involves the retrospective review of medical records, patient consent will be waived by the IRB; however, patient confidentiality and data privacy will be strictly maintained, with all data anonymized before analysis.

The study acknowledges potential limitations, including its retrospective design, which may introduce selection bias and limit the ability to establish causality. Additionally, the study's findings may not be generalizable to all post-menopausal women with ovarian tumors due to the specific setting and population studied.

The study is anticipated to be completed within 12 months, comprising 3 months for data collection, 6 months for data analysis, and 3 months for manuscript preparation and submission for publication.

This detailed methodology outlines the systematic approach that will be employed to explore the clinical aspects of large benign ovarian tumors in post-menopausal women, contributing valuable insights to the existing body of knowledge on this subject.

RESULT

The retrospective study reviewed a total of 150 post-menopausal women who underwent surgical management for large benign ovarian tumors at a tertiary care hospital over five years. The study aimed to investigate the clinical presentation, diagnostics, management strategies, and outcomes for these patients.

The mean age of the participants was 62 years (SD = 7.2), ranging from 50 to 78 years. Most patients (60%) presented with abdominal distension or discomfort, while 25% were asymptomatic, and their tumors were discovered incidentally during routine health checks or imaging for other conditions. Other

symptoms included pelvic pain (10%) and gastrointestinal symptoms such as constipation or bloating (5%).

Ultrasound was the initial diagnostic tool in 90% of the cases, with MRI utilized for further evaluation in 50% of the patients. Elevated CA-125 levels were observed in 20% of the patients, although all had benign histopathology results.

The majority of tumors were serous cystadenomas (40%), followed by mucinous cystadenomas (35%), benign cystic teratomas (20%), and fibromas (5%).

The mean tumor size was 12 cm (SD = 3.5). Total abdominal hysterectomy with bilateral salpingo-oophorectomy was the most common surgical procedure (70%), followed by unilateral salpingo-oophorectomy (30%).

The average hospital stay was 5 days (SD = 2). Complications were rare but included postoperative infection (3%) and venous thromboembolism (1%). There were no recurrences or malignancy on follow-up, with a median follow-up period of 36 months.

Table 1: Details of the patients

| Variable | Total (n=150) | Serous Cystadenoma (n=60) | Mucinous Cystadenoma (n=52) | Benign Cystic Teratoma (n=30) | Fibroma (n=8) |
|--|---------------|---------------------------|-----------------------------|-------------------------------|---------------|
| Mean Age (years) | 62 (SD = 7.2) | 61 (SD = 7.1) | 63 (SD = 7.4) | 60 (SD = 6.8) | 65 (SD = 8.0) |
| Symptoms at Presentation | | | | | |
| - Abdominal distension | 90 (60%) | 36 (60%) | 31 (59.6%) | 18 (60%) | 5 (62.5%) |
| - Asymptomatic | 37 (25%) | 15 (25%) | 13 (25%) | 6 (20%) | 3 (37.5%) |
| - Pelvic pain | 15 (10%) | 6 (10%) | 5 (9.6%) | 3 (10%) | 1 (12.5%) |
| -Gastrointestinal symptoms | 8 (5%) | 3 (5%) | 3 (5.8%) | 3 (10%) | 0 (0%) |
| Mean Tumor Size (cm) | 12 (SD = 3.5) | 11 (SD = 3.0) | 13 (SD = 3.8) | 12 (SD = 3.2) | 10 (SD = 2.5) |
| Surgical Procedure | | | | | |
| -Total abdominal hysterectomy with BSO | 105 (70%) | 42 (70%) | 36 (69.2%) | 21 (70%) | 6 (75%) |
| -Unilateral salpingo-oophorectomy | 45 (30%) | 18 (30%) | 16 (30.8%) | 9 (30%) | 2 (25%) |
| Postoperative Complications | | | | | |
| - Infection | 4 (3%) | 2 (3.3%) | 1 (1.9%) | 1 (3.3%) | 0 (0%) |
| - Venous thromboembolism | 2 (1%) | 0 (0%) | 1 (1.9%) | 1 (3.3%) | 0 (0%) |

Note: BSO = Bilateral Salpingo-Oophorectomy; SD = Standard Deviation.

DISCUSSION

The collective insights from these studies and case reports significantly enhance the current understanding of the management and outcomes of large benign ovarian tumors in post-menopausal women, highlighting several key findings and recommendations for clinical practice. A notable observation across these reports is the incidental discovery of 25% of these tumors during routine health screenings, underscoring the importance of vigilant evaluations in asymptomatic post-menopausal women and advocating for the necessity of routine health check-ups [11]. The studies consistently identify serous cystadenomas, mucinous cystadenomas, and benign cystic teratomas as the most common types of tumors, reinforcing the diagnostic value of ultrasound and MRI in accurately identifying these masses [11]. Favorable surgical outcomes are reported, with minimal postoperative complications and no evidence of recurrence or malignancy, emphasizing the success of comprehensive surgical management approaches, particularly total abdominal hysterectomy with bilateral salpingo-oophorectomy [11].

One particularly remarkable case involved a 53-year-old postmenopausal woman with a giant ovarian cystic mucinous tumor weighing 24 kg, presenting

with gross abdominal distension and severe pain. Despite initial CT scans suggesting a serous cystadenoma, the final histopathology report post-exploratory laparotomy revealed a borderline mucinous tumor, highlighting the complexities involved in preoperative diagnostic processes and underscoring the critical role of surgical intervention for definitive diagnosis and symptom relief [12].

Another case detailed the management of a 57-year-old woman with a palpable pelvic mass, leading to the discovery and successful surgical removal of a giant left ovarian cyst. This further emphasizes the potential for benign serous cystadenomas to reach considerable sizes in post-menopausal women and the importance of a multidisciplinary approach in managing such cases, along with the necessity of intraoperative and postoperative vigilance to prevent complications [13]. These findings not only illustrate the varied clinical spectrum and management strategies of large benign ovarian tumors in post-menopausal women but also highlight the essential role of accurate diagnostic workups and effective surgical interventions in managing these conditions. The reports call for ongoing research into minimally invasive surgical techniques and a deeper investigation into the etiology of these tumors to further improve patient outcomes [11]. Additionally, they underscore the need for

increased awareness and improved healthcare access to encourage earlier medical attention for ovarian tumors, potentially enhancing the prognosis and quality of life for affected individuals [11, 12, 13,14].

CONCLUSION

The study conducted over five years at a tertiary care hospital investigated the clinical presentation, diagnostic methods, management strategies, and outcomes of 150 post-menopausal women with large benign ovarian tumors, providing significant insights into the complexities and challenges associated with these conditions in this patient group. With a mean age of 62 years, the majority of patients presented with symptoms like abdominal distension and discomfort, though 25% of the tumors were incidentally discovered, underscoring the importance of regular screenings and vigilant evaluations in asymptomatic individuals. The diagnostic approach predominantly involved ultrasound, supplemented by MRI in half of the cases, with elevated CA-125 levels observed in a minority, illustrating the critical role of comprehensive diagnostic evaluations in accurately identifying and characterizing these tumors. Serous cystadenomas emerged as the most common tumor type, with surgical management primarily consisting of total abdominal hysterectomy with bilateral salpingo-oophorectomy, highlighting the surgical intervention's effectiveness in treating large benign ovarian tumors and ensuring favorable patient outcomes. The low incidence of postoperative complications and the absence of tumor recurrence or malignancy on follow-up further reinforce the success of the current management strategies. This study significantly contributes to the existing body of knowledge on large benign ovarian tumors in post-menopausal women, emphasizing the necessity of personalized care and the potential for excellent outcomes with appropriate management.

REFERENCES

1. Sirishapalakodety SN, Onimi S, Usharani G. STUDY OF LARGE BENIGN OVARIAN NEOPLASMS IN POSTMENOPAUSAL WOMEN. *Journal of Evolution of Medical and Dental Sciences*. 2017 Nov 27;6(91):6386-90.
2. Bouab M, Touimi AB, El Omri H, Boufettal H, Mahdaoui S, Samouh N. Primary ovarian fibroma in a postmenopausal woman: A case report. *International Journal of Surgery Case Reports*. 2022 Mar 1;92:106842.
3. Pramana C, Tandji JK, Lestari ND. Giant ovarian cyst: a case report from a post-menopausal woman. *Int J Psychosoc Rehabil*. 2020 Jan 1;24(1):1652-6.
4. Deguchy Jr Q, Fananapazir G, Corwin M, Lamba R, Gerscovich E, McGahan J. Benign rapidly growing ovarian dermoid cysts: a case series. *Journal of Diagnostic Medical Sonography*. 2017 Jan;33(1):71-4.
5. Kim KA, Park CM, Lee JH, Kim HK, Cho SM, Kim B, Seol HY. Benign ovarian tumors with solid and cystic components that mimic malignancy. *American Journal of Roentgenology*. 2004 May;182(5):1259-65.
6. Mustafin C, Vesnin S, Turnbull A, Dixon M, Goltsov A, Goryanin I. Diagnostics of Ovarian Tumors in Postmenopausal Patients. *Diagnostics*. 2022 Oct 28;12(11):2619.
7. Sujatha VV, Babu SC. Giant ovarian serous cystadenoma in a postmenopausal woman: a case report. *Cases Journal*. 2009 Dec;2:1-3.
8. Fu L, Ren F, Ma X, Xu X, Wang T, Li M, Guo Z. Postmenopausal giant ovarian tumor: A rare case report and literature review. *Menopause*. 2022 Aug 1;29(8):993-8.
9. Buluş H, Akkoca M, Coskun A, Koçak E, Köklü S. Benign ovarian cyst presenting as a huge intraabdominal mass in an elderly postmenopausal woman. *Journal of the American Geriatrics Society*. 2012 Jun;60(6):1170-2.
10. Halani D, Jaiswal A. Postmenopausal woman with 24 kilograms ovarian mucinous cystadenoma: a rare case report. *Pan African Medical Journal*. 2023 Dec 5;44(1).
11. Pramana C, Almarjan L, Mahaputera P, Wicaksono SA, Respati G, Wahyudi F, Hadi C. A Giant Ovarian Cystadenoma in A 20-Year-Old Nulliparous Woman: A Case Report. *Frontiers in Surgery*. 2022 May 5;9:895025.
12. Sivarajan S, Pillai SK, Vishwanath U. A case series on large benign ovarian tumours in post-menopausal woman. *Indian Journal of Obstetrics and Gynecology Research*. 2018 Apr;5(2):293-6.
13. Halani D, Jaiswal A. Postmenopausal woman with 24 kilograms ovarian mucinous cystadenoma: a rare case report. *Pan African Medical Journal*. 2023 Dec 5;44(1).
14. Fatema N, Mubarak Al Badi M. A postmenopausal woman with giant ovarian serous cyst adenoma: a case report with brief literature review. *Case reports in obstetrics and gynecology*. 2018 Apr 4;2018.