

Frequency of Presenting Complaints Among Women Having Adnexal Masses

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Abstract: Adnexal masses in reproductive-age women present with a spectrum of gynecological and nonspecific symptoms that can delay diagnosis. Understanding the pattern of presenting complaints may facilitate earlier recognition and targeted evaluation. Data from local tertiary care centers in Pakistan remain limited. **Objective:** To determine the frequency of presenting complaints among women with adnexal masses at Hayatabad Medical Complex. **Methodology:** This study included 174 women aged 18 to 45 years with adnexal mass, which was confirmed on ultrasonography. Patients with recent surgery for pregnancy, chronic liver disease, or irritable bowel syndrome were excluded. The presenting complaints were dysmenorrhea which was defined as chronic spasmodic pelvic pain with menstruation, menorrhagia as prolonged bleeding over seven days or requiring pad changes more frequently than two-hourly and abdominal distension as a visibly swollen abdomen with bloating. Data analysis was performed using SPSS version 25. **Results:** Mean age of the cohort in this study was 29.87±8.52 years. The most frequently reported complaint was dysmenorrhea 60 (34.5%). Followed by menorrhagia, 41 (23.6%). Abdominal distension was observed in 20 (11.5%) cases. Younger age was associated with symptoms such as dysmenorrhea and menorrhagia. **Conclusion:** The findings of the present study indicate that dysmenorrhea is the most common presenting symptom in women with adnexal masses, followed by menorrhagia and abdominal distention.

Keywords: Adnexal Mass, Dysmenorrhea, Menorrhagia, Abdominal Distension

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Introduction

Adnexal masses are frequently encountered and may cause abdominal discomfort or be incidentally discovered during imaging performed for other purposes. The majority of masses identified in the adnexa are totally benign. However, some may exhibit precancerous or malignant features (1,2). The objective of managing benign lesions is to provide reassurance to patient while addressing their clinical demands, all without subjecting them to unnecessary or overly invasive procedures. Conversely, optimal outcomes can be attained by directing patients who demonstrate traits linked to an elevated risk of ovarian cancer toward a specialized clinic (3,4).

The clinical and imaging results, rather than histological data, determine the clinical decision regarding the level of aggressiveness required to manage ovarian tumors. Adnexal masses may present clinically in diverse ways, with many patients remaining asymptomatic until the mass ruptures or undergoes torsion. Adolescent girls diagnosed with adnexal tumors frequently show pelvic pain, which stands as the most common gynecological symptom along with a primary reason for hospitalization (5,6). Due to heightened pressure on abdominal organs, women presenting with symptoms may also observe alterations in bowel movements alongside urinary patterns. A study indicated various presenting complaints associated with adnexal masses, including dysmenorrhea at 40.59%, menorrhagia at 21.18% and abdominal distension at 12.94% (7). Adnexal identification and Diagnosis from the beginning requires a heightened level of suspicion, along with thorough history-taking and physical examination. Given that both malignant and benign ovarian tumors frequently present with significant symptoms alongside ongoing symptoms, additional diagnostic evaluations are necessary. Surgical assessment of an adnexal mass is required in certain patients, and this determination must be made after thorough analysis of the differential diagnosis and the mass's clinical characteristics. (8-10)

Adnexal masses can originate from both gynaecological and non-gynaecological sources, encompassing a spectrum from normal luteal

cysts to ovarian malignancies and bowel abscesses. The existing literature on the clinical presentation of adnexal masses in our local population is notably limited. This investigation was conducted to determine the most prevalent presenting symptoms in women with such masses. The results are anticipated to facilitate earlier diagnosis and the implementation of preventive measures, potentially reducing the progression of the condition.

Methodology

A cross-sectional study was conducted in the Department of Obstetrics and Gynaecology at Hayatabad Medical Complex, Peshawar, from March 2025 to September 2025. The sample size was calculated at 174 with a confidence level of 95% and an absolute precision of 5%, based on a reported abdominal distension frequency of 12.94% from a previous study. (7) A consecutive non-probability sampling technique was used.

The study included women aged 18 to 45 who were diagnosed with an adnexal mass on pelvic ultrasonography. The diagnosis was based on the presence of any two of the following sonographic features: a solid component, septations greater than 2mm, ascites, and bilaterality. Patients who had been recently operated on for pregnancy, those with a known chronic liver disease, and those diagnosed with irritable bowel syndrome were excluded from the study.

Written consent was obtained from all patients who agreed to take Part in the study. Data collection involved demographic details of the patients. A physical examination was conducted, and a detailed medical history was taken from each patient. Presenting symptoms were assessed, such as dysmenorrhea, which was defined as a history of chronic spasmodic pain commencing immediately before or during menstruation, located in the pelvic and lower abdominal region, and lasting for hours or days. Menorrhagia was defined as heavy menstrual bleeding requiring pad changes more frequently than every two hours and lasting for more than seven days. Abdominal distension was described as a visibly and palpably swollen abdomen accompanied by subjective feelings of bloating or



trapped gas. An experienced consultant oversaw the entire evaluation process.

For data analysis, SPSS 25 was utilised. Age was presented using mean and standard deviation. Socioeconomic status, marital status, tumor size, and presenting symptoms were presented as frequencies and percentages. The chi-square test was used to stratify presenting symptoms by age. P-value < 0.05 was deemed significant.

Results

Based on analysis of 174 women presenting with adnexal masses, the average age was 29.87 ± 8.52 years. Regarding socioeconomic background, most women (102, 58.6%) belonged to the middle class, followed by 45 (25.9%) from the lower class. In terms of marital status, 122 (70.1%) women were married, and 52 (29.9%) were unmarried.

(Table 1). The size of the adnexal tumours was also recorded. Most masses (121, 69.5%) were 7 cm or smaller in diameter (Figure 1). Regarding presenting symptoms, dysmenorrhea was reported in 60 women (34.5%). Menorrhagia was present in 41 cases (23.6%). Abdominal distension was less frequently reported, noted in only 20 cases (11.5%) (Table 2).

The relationship between age and specific presenting complaints revealed notable patterns. Dysmenorrhea was reported by 41 (68.3%)patients who were in the younger age group of 18-30 years, compared to 19 (31.7%) in the 31-45 year group (p=0.03). Menorrhagia was reported by 35 (85.4%) of the cases being in the 18-30 year group, compared to just 6 (14.6%) in the older group (p<0.001). Abdominal distension was reported in 9 (45.0%) cases among younger women and 11 (55.0%) among older women. This difference was not found to be statistically significant (p=0.23) (Table 3).

Table 1: Demographic profile

Demographic profile		n	%
Age distribution (years)	18 to 30	100	57.5%
	31 to 45	74	42.5%
Socioeconomic status	Lower Class (< 50K /Month)	45	25.9%
	Middle Class (50K-100K /Month)	102	58.6%
	Upper Class (> 100K /Month)	27	15.5%
Marital status	Married	122	70.1%
	Unmarried	52	29.9%

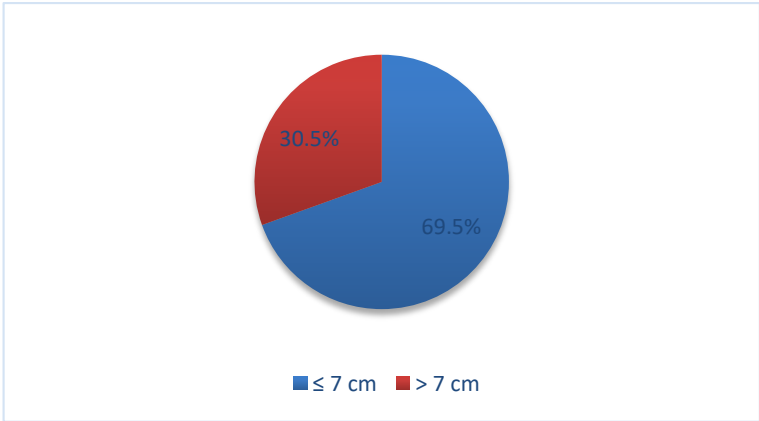


Figure 1: Tumor size (cm)

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Table 2: Presenting symptoms

Presenting symptoms		n	%
Dysmennorhea	Yes	60	34.5%
	No	114	65.5%
Menorrhagia	Yes	41	23.6%
	No	133	76.4%
Abdominal distension	Yes	20	11.5%
	No	154	88.5%

Table 3: Stratification of presenting symptoms with age

Presenting symptoms		Age distribution (years)				P value
		18 to 30		31 to 45		
		n	%	n	%	
Dysmennorhea	Yes	41	68.3%	19	31.7%	0.03
	No	59	51.8%	55	48.2%	
Menorrhagia	Yes	35	85.4%	6	14.6%	< 0.001
	No	65	48.9%	68	51.1%	

Abdominal distension	Yes	9	45.0%	11	55.0%	0.23
	No	91	59.1%	63	40.9%	

Discussion

Demographically, the mean age of the patients was 29.87 years. Rajia et al. reported a similar mean age of 27.82 years in their study. (12) Another study by Syed et al. also reported a mean age of 25.6 years. (13) Batool et al. reported a mean age of 31.1 years, and Bhagde et al. reported a mean age of 31.5 years. (14,15) These observations suggest that adnexal masses are a significant health issue for women of reproductive age.

Regarding marital status, this study found that 70.1% patients were married. This finding is consistent with Kouser et al., who reported that 80.59% of their patients were married, and with Rajia et al. (2022), who found that 72% of women were married. (7,12) The socioeconomic distribution showed that 58.6% of patients were from the middle class; this is similar to the work of Rajia et al., who reported that 62% of their participants were from the lower-middle class. (12)

The present study found that the majority of the adnexal masses (69.5%) were 7 cm or smaller. This is consistent with Kouser et al., who reported 93.53% of masses were under 8 cm. (7) In contrast, Syed et al. reported a mean tumour size of 9.2 cm. Syed et al. focused specifically on surgical cases, which may be associated with larger, more symptomatic masses requiring intervention. (13)

Regarding the presenting complaints, dysmenorrhea affected 34.5% patients. This finding is similar to that of Kouser et al., who reported a 40.59% frequency of dysmenorrhea. (7) Rajia et al. observed dysmenorrhea in 54% of their study group. (12) Menorrhagia was reported by 23.6% patients in this study. Kouser et al. reported a similar Figure of 21.18%. (7) Abdominal distension was a less frequent complaint, present in only 11.5% of cases. This aligns with Kouser et al., who found abdominal distension in 12.94% of patients. (7)

We found a strong, significant association between younger age (18-30 years) and the presence of both dysmenorrhea and menorrhagia. For menorrhagia, this relationship was especially marked, with 85.4% of cases occurring in the younger cohort. Younger women are more likely to have functional hormonal disturbances, endometriosis, or benign conditions like adenomyosis that directly cause menstrual irregularities and pain. As women age into their fourth and fifth decades, the incidence of hormonally mediated symptoms might be expected to decline. In contrast, the risk of non-specific symptoms or those related to malignancy may increase. The finding that abdominal distension showed no significant association with age further supports this, as it is a symptom less tied to hormonal cycles and more to mass effect, which can occur at any age.

Based on these findings, we suggest maintaining a high index of suspicion for adnexal masses in younger women presenting with significant dysmenorrhea or menorrhagia, especially if the symptoms are new or have changed in character. Gynaecologists should consider a thorough pelvic examination and ultrasonography for such patients to avoid delayed Diagnosis.

The study was conducted at a single tertiary care centre, which may limit the generalisability of the findings to the broader population or to primary care settings where presentation might differ. Finally, the reliance on clinical presentation and basic imaging, without correlation with final histopathological diagnoses in all cases, means that the underlying pathology driving symptoms across different age groups cannot be definitively confirmed.

Conclusion

In conclusion, this study showed that adnexal masses most frequently affect young, married women from middle-class backgrounds, with dysmenorrhea being a predominant symptom (34.5%), followed by menorrhagia (23.6%) and abdominal distension (11.5%).

Declarations

Data Availability statement

All data generated or analysed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department concerned. (IRBEC-MMS-24)

Consent for publication

Approved

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Conflict of interest

The authors declared no conflicts of interest.

Author Contribution

LB (Post Graduate Resident)

Manuscript drafting, Study Design,

KA (Post Graduate Resident)

Review of Literature, Data entry, Data analysis, and drafting articles.

AS (FCPS Part 2)

Conception of Study, Development of Research Methodology Design

PB (Post Graduate Resident)

Study Design, manuscript review, and critical input.

LI (Postgraduate Resident)

All authors reviewed the results and approved the final version of the manuscript. They are also accountable for the integrity of the study.

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