

Clinical profile of patients operated for benign adnexal tumors and the histopathological types

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ABSTRACT

Objective: To study the clinical presentation of patients with benign adnexal tumors who had surgical management and the histopathological types of the tumors.

Methods: Retrospective data were collected on 110 patients who underwent surgery for benign adnexal tumor from January 1999 through to April 2002, in Sultan Qaboos University Hospital, Sultanate of Oman. The histopathological types of the tumors were also studied.

Results: Abdominal pain was the commonest presenting

symptom in 65% of the patients followed by abnormalities of vaginal bleeding. Most of the patients were managed by laparotomy and ovarian cystectomy. The commonest histopathological type was benign mature teratoma in 28% of the patients.

Conclusion: Benign mature teratoma was the commonest histopathological type. Most of the patients had laparotomy; ovarian cystectomy and recurrences were few.

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Ovarian cysts are the fourth commonest cause for admissions to gynecologic wards¹ and the third commonest cause of laparoscopic pelvic surgeries.² Laparoscopy is becoming an increasingly preferred approach for the management of benign adnexal tumors.³ Many of the studies performed showed that benign teratoma was the commonest benign adnexal tumor^{4,5} while others showed that serous cystadenoma was the commonest.⁶

Methods. Clinical records were retrieved of consecutive women who had surgical management of benign adnexal tumors in the period from January 1999 to April 2002 in Sultan Qaboos University Hospital, Sultanate of Oman. Age, marital status, parity and associated conditions like intrauterine

pregnancy, ectopic pregnancy, infertility and uterine fibroids were studied. The presenting symptoms and clinical findings were noted. The ultrasonic and operative findings of side, size and type of the tumor were analyzed and compared to each other. All patients had histopathological examination of their tumors when excised or cytologic analysis of the cyst aspirate and these results were also studied.

Results. During the study period 110 patients had operative management of benign adnexal tumors, contributing to 3.6% of the total admissions to the gynecologic wards. The mean age at presentation was 29.7 years ranging from 12-60 years. Seventy-eight percent of the patients were married with an average parity of 3.0 ranging from para 0-para 15. Nulliparous

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patients constituted 40% of the patients. The main presenting symptom was abdominal pain (65%) followed by abnormal vaginal bleeding in 29% of patients. Abdominal mass was the presenting symptom in 14% patients and 21% patients presented with nausea or vomiting. Only 11% patients were asymptomatic. Twenty-two percent of the patients had acute symptoms lasting for one day or less, 19% had symptoms of 2-7 days and the rest 59% had chronic symptoms. Sixty-eight percent of the patients were admitted as elective cases, while the other 37% were admitted and operated as emergency cases. On clinical examination, a mass was palpable in 39% by abdominal examination and in 70% by vaginal examination with tenderness present in 32% of the patients.

By ultrasound examination most of the tumors were found to be in the right adnexa (46%) compared to 31% on the left and 23% bilaterally. Sixty-eight percent of the tumors were assessed to be ≥ 6 cm in diameter and 32% < 6 cm by ultrasound scan. Twenty-six percent were clear cysts, 44% cysts with internal echoes, 26% mixed cystic and solid and 4% solid structures. Ten percent of the patients were found to have free fluid in the peritoneal cavity by ultrasound examination. During surgery 53% of the tumors were right sided, 30% left sided and 17% bilateral. Seventy-two percent of tumors were ≥ 6 cm in diameter. At laparotomy 24% were associated with adhesions, 16% with torsion 15% with hemoperitoneum and 8% tumors had ruptured. The main surgical approach was laparotomy in 75% of the patients, 4% had laparoscopy and 21% had laparoscopy and laparotomy. 53% of the tumors were managed by ovarian cystectomy, 37% by salpingo-oophorectomy, 5% had cyst aspiration and the other 5% had hysterectomy. There was a good correlation between ultrasonic and operative findings; 90% regarding the tumor size whether < 6 cm or ≥ 6 cm; 83% correlation regarding the side of the tumor and 67% correlation in the suspected type of the tumor. The most common benign adnexal tumor was benign mature teratoma (28%) followed by functional ovarian cysts (25%), endometrioma (17%) and mucinous and serous cystadenoma in 10% and 12% of the patients (Table 1).

The bilateral tumors include benign teratoma 6%, functional ovarian cysts 5%, endometrioma 5% and serous cystadenoma in one percent. Thirteen percent of the patients had associated intrauterine pregnancy, including 5% with benign mature teratoma, 4% with functional ovarian cysts, 2% with mucinous cyst adenomas and one percent with hemorrhagic and serous cyst adenomas. Three percent had ectopic pregnancies with one percent of them having functional ovarian cyst, one percent endometrioma and one percent benign mature teratoma. Of those with infertility 6% had endometrioma, 5% functional ovarian cysts, 3% benign teratoma and 2% serous

Table 1 - The histopathological types of benign adnexal tumors.

Histopathological type	(%)
Teratoma (dermatoid)	28
Functional	25
Endometriomas	17
Serous	12
Mucinous	10
Hemorrhagic	4
Fibroma	2
Par ovarian	2

cystadenoma. Of the cases with uterine fibroids, the most common associated benign adnexal tumors were benign teratoma and endometrioma. There was 4% rate of recurrence of benign adnexal tumors following surgery. Two percent of functional ovarian cysts and 2% of endometriomas recurred. Of the 4% recurrence 3% were managed by ovarian cystectomy and one percent by aspiration of an ovarian cyst. None of the recurrences were following cyst aspiration.

Discussion. In our study patients presented at a younger age (average 29.7 years) compared to other studies.⁵⁻⁷ The most common histopathological type of benign mature teratoma was similar to other studies.^{4,5} Although laparoscopy is increasingly becoming the main approach of management,³ laparotomy was still the commonest approach in our study and this is similar to Nowak et al⁶ who reported 80% of the patients had laparotomy as compared to 20% who had laparoscopy. Ovarian cystectomy was the commonest surgical procedure used for the management of benign adnexal tumors, unlike the other studies were salpingo-oophorectomy was most commonly used and this might be related to cultural factors concerning fertility in our society.²

Our study showed that benign adnexal tumors were most commonly found in the reproductive age group of 18-40 years. The main presenting symptom was abdominal pain. Vaginal examination is a better clinical examination compared to abdominal examination probably due to the size of the tumors. There was a good correlation between findings on ultrasound and operative findings; therefore, ultrasound should be used routinely as a diagnostic examination of adnexal tumors. In our study most of the tumors were found on the right side. Benign mature teratoma was the commonest histopathological type. Most of the patients had laparotomy, and ovarian cystectomy and recurrences were few.

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