



CODEN [USA]: IAJPBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.3332804>

Available online at: <http://www.iajps.com>

Research Article

A CROSS SECTIONAL STUDY ON THE RATE OF OCCURRENCE AND TYPES OF OVARIAN TUMORS

¹Dr Salma Aziz, ²Dr Abdul Sahban Shad, ³Dr Atta-U-Rehman

¹House Officer, Mayo Hospital Lahore, ²DHQ Teaching Hospital, D.I Khan,

³Gomal Medical College, D.I Khan

Article Received: May 2019

Accepted: June 2019

Published: July 2019

Abstract:

Objective: This research work aimed to determine the rate of occurrence and various kinds of the ovarian tumors in accordance with the age of the patients.

Methodology: In this research work, we reviewed the ovarian tumors identified in the duration of complete three years from 2016 to 2018 in the Pathology Department of Mayo Hospital, Lahore.

Results: We reviewed total two hundred and twenty-seven patients. Total one hundred and eighty-one abrasions were available as benign tumors and forty-six tumors were malignant. Most frequent occurring benign tumors were surface epithelial tumors and contain adenoma of serous cyst adenoma with rate of occurrence of 55.0% followed by adenoma of mucinous cyst in 20.0%. Tumors of benign germ cell were 25.0% the most frequent available malignant abrasion was serous cyst adeno-carcinoma present in 38.0% patients followed by 17.0% patients of mucinous cyst adeno-carcinoma & two patients were available with carcinoma of clear cell. Tumors of germ cell were composed of teratoma as 11.0%, tumor of yolk sac as 9.0%, tumor of mixed germ cell as 4.0% and only one case of dysgerminoma. The rate of occurrence of sex-cord stromal tumors was about 17.0%. Majority of the patients suffering from benign tumors were in their 3rd & 4th decade of life. But the majority of the patients suffering from the malignant tumors were available in their 5th and 6th decade of life.

Conclusion: In accordance with the findings of this case work, the most frequent available ovarian tumors were surface epithelial tumors followed by the tumors of the germ cells.

Key Words: Decade, Tumors, Ovary, Serous, Germ Cells, Cyst, Gynecological, Benign, Malignant.

Corresponding author:

Dr. Salma Aziz,

House Officer, Mayo Hospital Lahore.

QR code



Please cite this article in press Salma Aziz et al., A Cross Sectional Study On The Rate Of Occurrence And Types Of Ovarian Tumors., Indo Am. J. P. Sci, 2019; 07[07].

INTRODUCTION:

The tumors of ovaries are responsible for an important amount of the gynecological morbidity and mortality in the whole world. Benign cysts of ovaries are the 4th most frequent occurring gynecological reason of the admissions in the hospital [1]. A variety of the features through histology as well as prognosis are helpful for the characterization of the tumors [2]. Females of Japan have stated very occurrence of the ovarian cancer, particularly of epithelial type as compared to the females of United states & Europe [3]. About, 90.0% of the tumors of ovaries are benign. The 6th most frequent cancer among females is ovarian carcinoma and it is the 4th most prompting reason for high rate of mortality in females [4]. Relative rate of occurrence of the malignant tumors including cancer of ovaries in our country Pakistan has enhanced over the years [5]. It rating is 3rd cancer for the women of South Karachi [6]. A research work conducted at AFIP (Armed Forces Institute of Pathology) located in Rawalpindi [7] stated that ovarian carcinoma was the most common responsible for 37.10% of the gynecologic malignant tumors.

Most of the females suffering from the epithelial carcinomas of ovaries were present with a median age of sixty-three years and they were in their post-menopausal age. Factors of environments, hormones and gene are the vital contributors for the development of the cancers of ovaries [8]. This research work

conducted in the department of Pathology of the institute. The aim of this research work was to observe the rate of occurrence and various kinds of the cancer of ovaries as compared to the finds of many local and international studies.

METHODOLOGY:

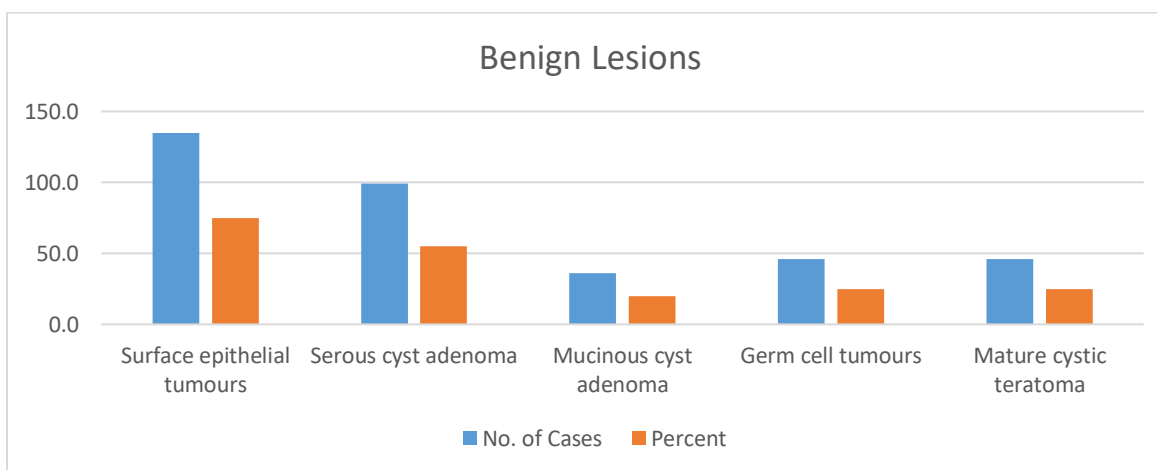
This was a retroactive research in which we reviewed all the tumors of ovaries in the duration of complete three years from 2016 to 2018 in the Pathology Department of the Mayo Hospital, Lahore. There were total two hundred and twenty-seven patients of this disease in this research work. We reviewed the stained sections of the H&E (Hematoxylin & Eosin) for the classification of the tumors. We used the special stains as PAS to support the achievement for an exact particular identification of the type of tumor.

RESULTS:

There were total two hundred and twenty-seven patients with ovarian tumors. Among these ovarian tumors, 80.0% (n: 181) were benign tumors and 20.0% (n: 46) tumors were malignant. The most common benign tumors were surface epithelial tumors available in 75.0% cases followed tumors of germ cell in 25.0%. The most common surface epithelial tumor was the adenoma of serous cyst present in 55.0% (n: 99) followed by the adenoma of mucinous cyst in 20.0% (n: 36). About 25.0% (n: 46) cases of the germ cell tumors were the teratoma as presented in Table-1.

Table-I: Distribution of Benign Lesions (n=181).

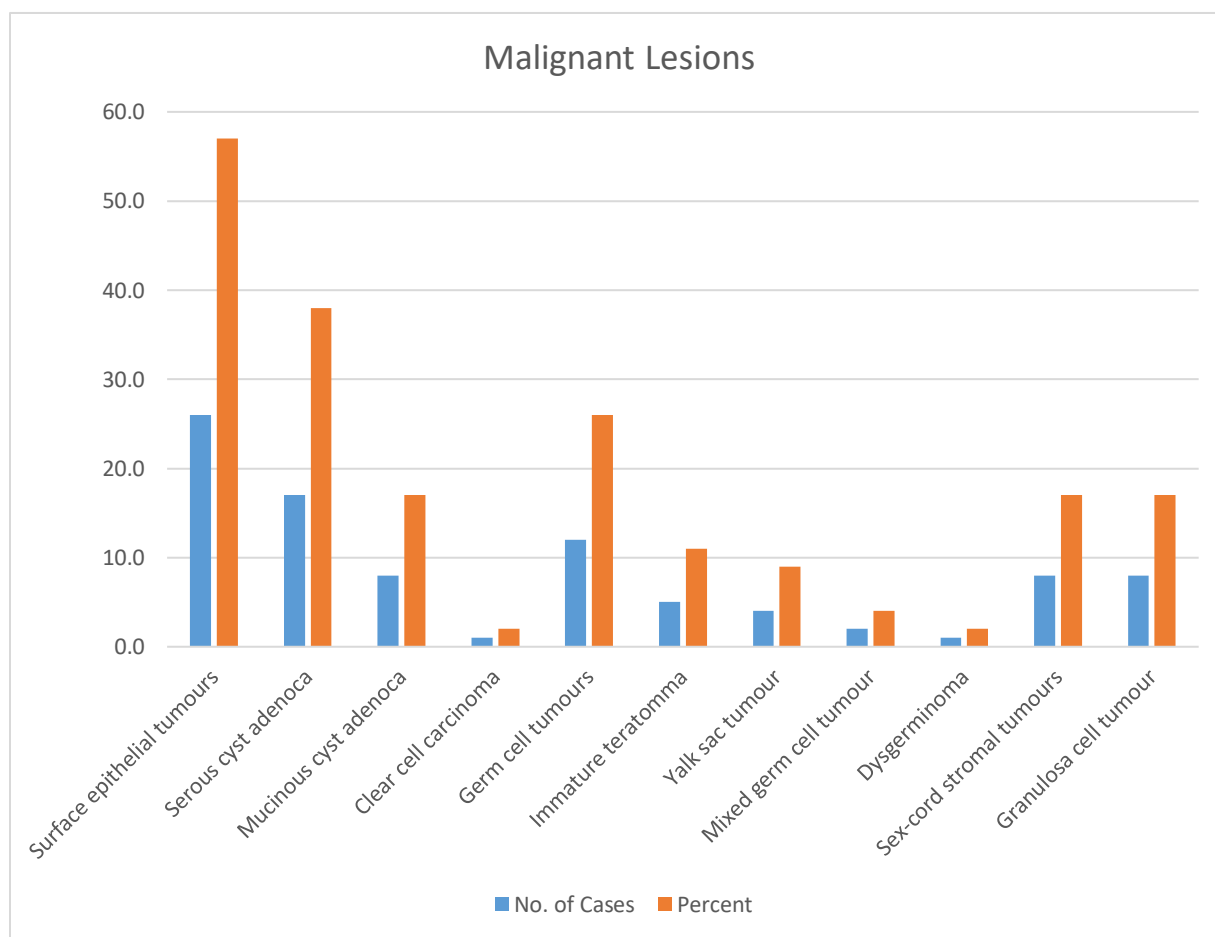
Type	No. of Cases	Percent
Surface epithelial tumors	135.0	75.00
Serous cyst adenoma	99.0	55.00
Mucinous cyst adenoma	36.0	20.00
Germ cell tumors	46.0	25.00
Mature cystic teratoma	46.0	25.00



In case of the malignant tumors, adeno-carcinoma of the serous cyst 38.0% (n: 17) was the most common malignant tumor followed by the 17.0% (n: 8) cases present with mucinous cyst adeno-carcinoma & 2.0% (n: 1) case was present with clear cell carcinoma. The tumors of the germ cells were made up of 11.0% (n: 5) cases of teratoma followed by the tumors of the yolk sac in 9.0% (n: 4), tumors of the mixed germ cell 4.0% (n: 2) and 2.0% (n: 1) case was present with dysgerminoma. The rate of occurrence of sex-cord stromal tumors was about 17.0% (n: 8) which contains the granulosa cell tumors as presented in Table-2.

Table-II: Distribution of 46 malignant lesions.

Type	No. of Cases	Percent
Surface epithelial tumors	26.0	57.00
Serous cyst adenoca	17.0	38.00
Mucinous cyst adenoca	8.0	17.00
Clear cell carcinoma	1.0	2.00
Germ cell tumors	12.0	26.00
Immature teratoma	5.0	11.00
Yolk sac tumor	4.0	9.00
Mixed germ cell tumor	2.0	4.00
Dysgerminoma	1.0	2.00
Sex-cord stromal tumors	8.0	17.00
Granulosa cell tumor	8.0	17.00



Majority of the patients of the benign tumors were in their 3rd and 4th decade of life and most of the patients suffering from malignant tumors were in their 5th and 6th decade of life as presented in Figure-1.

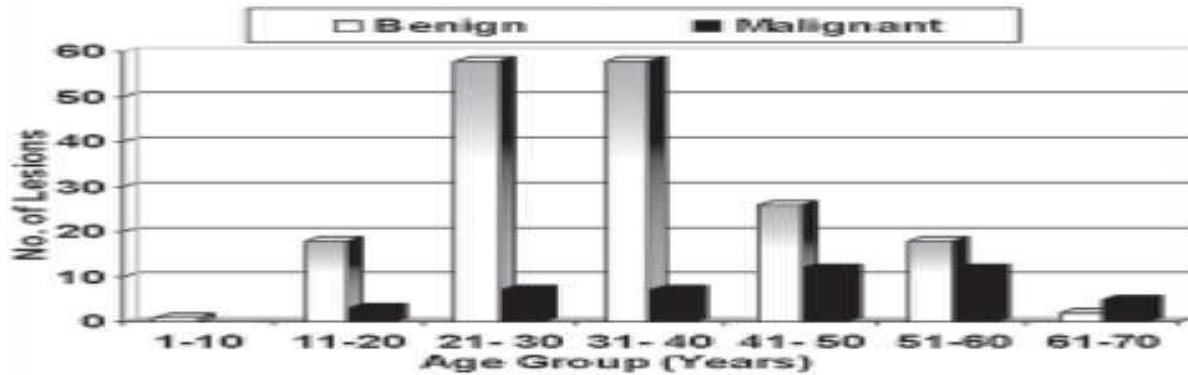


Figure 1

DISCUSSION:

The tumors of ovaries are very common cause for the admissions of gynecology in the whole world. The main issue with this incidence is that most of the patients appear with advance stage of malignancy or some serious complication in shape of [1]. In current research work, the rate of occurrence of benign tumors of ovaries was 80.0% whereas malignant tumors were 20.0%. These outcomes are similar with the results of the Sultana [9] who stated benign & malignant tumors as 79.0% & 21.0% correspondingly. The results of current research work are also much comparable with the findings of a hospital located in Abbottabad [10]. We observed no significant disparity with respect to malignant and benign tumors of ovaries when this current work compared with another research work conducted in Rawalpindi [11] in which the rate of occurrence of malignant & benign tumors was 24.0% and 76.0% correspondingly. In opposition, a retroactive research work conducted at Agha Khan Hospital located in Karachi [12] observed a high occurrence (40.80%) of malignant tumors of ovaries.

The cause behind this high occurrence was the malignancy was referrals of the patients of cancer to these hospitals. Other probable reason was the timely reporting & identification of the malignancy by the well-equipped hospitals. A high prevalence of malignant tumors of ovaries was present in the research works of India as 36.50% [13] & Nepal as 31.0% [14]. In this recent research work, the most common type of the ovarian tumors was surface epithelial tumors followed by tumors of germ cell. These findings are similar with the concluded results of some local studies [5, 11, 12] & many international research works [15-17]. The most common benign tumors were adenoma of serous cyst as 55.0%, which is much similar with the research works of Ahmed [5], Khan [11] and Ahmed [12] who stated the same

outcomes with different frequencies. Cancer of ovaries rank in the 10 most frequent cancers in the females of Pakistan. Their rank is 5th to 7th in many research works of Pakistan [18, 19].

In current research work, most frequent surface epithelial cancer was serous cyst adeno-carcinoma followed by mucinous cyst adeno-carcinoma. These results are same with the outcome of Malik [8], Ahmed [12] & Zahra [20]. But in some local research works [7, 21, 22], mucinous cyst adeno-carcinoma was the most common tumor followed by the serous tumors. It looks that the occurrence of the mucinous tumors is very frequent in the general population of our country in comparison with the countries of the west [23, 24]. Majority of the patients suffering from benign tumors were in 3rd & 4th decade of their life whereas malignant tumors were present in 5th & 6th decade of their life. These findings are having an agreement with the research works of Ahmed [5] and Ahmed [12]. Most of the patients suffering from malignant tumors were available in the age group of 41-60 years. These findings are similar with many local research works [5, 7, 12] but different from many research works of countries of west [23, 25].

CONCLUSION:

The results of this research work provide with the basic effective information about the rate of occurrence and the types of the tumors of ovaries. Though this research work is very simple analysis but the main aim of the work is to clear the ways for the huge clinically oriented research works to describe the factors of risks in our public, there is a need of the research work with large sample size to examine the particular causative factors and their comparison with the local studies and research works from western countries to consolidate the findings.

REFERENCES:

1. Tortolero L, Mitchell FM, Rhodes HE. Epidemiology and screening of ovarian cancer. *Obstet Gynecol Clin North Am* 1994; 21:63-75.
2. Ahmed M, Malik TM, Afzal S, Mubarik A. Clinicopathological study of 762 ovarian neoplasms at Army Medical College Rawalpindi. *Pak J Pathol* 2004;15(4):147-152.
3. Bhurgri Y, Bhurgri A, Hasan SH, Zaidi S., Rahim, A., Sankaranarayanan R. Cancer incidence in Karachi, Pakistan: first results from Karachi cancer registry. *Int J Cancer* 2000; 85:325-9.
4. Jamal S, Malik IA, Ahmed M, Mushtaq S, Khan AH. The pattern of malignant ovarian tumors, a study of 285 consecutive cases at the Armed Forces Institute of Pathology Rawalpindi. *Pak J Pathol* 1993;4(2):107-109.
5. Yasmin S, Yasmin A, Asif M. Frequency of benign and malignant ovarian tumors in a tertiary care hospital. *JPMI* 2006; 20:393-397.
6. Malik JA. A prospective study of clinicopathological features of epithelial ovarian cancer. *J Pak Med Assoc* 2002; 52:155-158.
7. Sultana A, Hasan S, Siddiqui QA. Ovarian tumors, A five years' retrospective study at Abbasi Shaheed Hospital Karachi. *Pak J Surg* 2005;21(1):37-40.
8. Alam I, Waqar F, Khan A, Begum N. Prevalence & management of ovarian tumors in Women & Children Hospital Abbottabad. *J Ayub Med Coll* 2001; 13:19-21.
9. Khan AA, Luqman M, Jamal S, Mamoon N, Mushtaq S. Clinico-pathological analysis of ovarian tumors. *Pak J Pathol* 2005;16(1):28-32.
10. Parkin DM, Whelan SL, Ferlay J, Raymond L, Young J. *Cancer incidence in five continents. Volume VIII, IARC, Lyon, 1997.*
11. Inai K, Shimizu Y, Kawai K, Tokunagar M, Soda M, Mabuchi K, et al. A pathology study of malignant and benign tumors among atomic bomb survivors. Case series report. *J. Radiat Res* 2006; 47:49-59.
12. Rosai J. The Ovary. In: Rosai & Ackerman's surgical pathology. 9th ed. ST. Louis Mosby USA. 2004: 1649 -1736.
13. Ahmed Z, Kayani N, Hasan SH, Muzaffar S, Gill M.S. Histological pattern of ovarian neoplasms. *J Pak Med Assoc* 2000; 50:416-419.
14. Mukherjee C, Dasgupta A, Ghosh RN, Sengupta J. Ovarian tumors, a ten years' study. *J Obstet Gynaecol India* 1991; 41:691-6.
15. Crom CP. The female genital tract. In Cotran RS, Kumar V, Collin T (eds); *Robbins Pathologic Basis of Disease. Sixth edition, Philadelphia, W.B Saunders Company* 1999: 1068.
16. Muhammad A, Makaju R. Retrospective histopathological analysis of ovarian neoplasms of the female reproductive system seen at Kathmandu University teaching Hospital, Dhulikhel Nepal. *Kathmandu University Med J* 2006;4(1):48-53.
17. Russel P. Surface epithelial – stromal tumors of the ovary. In Kumar RJ (ed). *Blaustein's Pathology of the female genital tract. Fourth edition. London Springer-Verlag, 1994: 763.*
18. Rosai J. Rosai & Ackerman's surgical pathology. 9th ed. Milan Mosby 2004: 2953.
19. Gupta N, Bisht D, Agarwal AK, Sharma VK. Retrospective and prospective study of ovarian tumors and tumour like lesions. *Indian J Pathol Microbiol* 2007;50(3):525-527.
20. Wooster R, Weber BL. *Breast & Ovarian cancers. N Engl J Med* 2003; 348:2339-2347.
21. Jafarey NA, Zaidi SHM. Cancer in Pakistan. *J Pak Med Assoc* 1987; 37:178-83.
22. Khan SM, Gillani J, Nasreen S. Cancer in North West Pakistan & Afghan refugees. *J Pak Med Assoc* 1997; 47:122-124.
23. Zahra F. The pattern of ovarian masses. *Annals* 2006;12(4):480-482.
24. Zaman S. Histological pattern of ovarian neoplasms. A dissertation in partial fulfillment of the requirement for FCPS II, 1996.
25. Malik M, Aziz F. Malignant ovarian tumors, a study of 75 patients. *Pak J Obstet Gynaecol* 1999;12(1):83-86.