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INTRODUCTION

Cystic lesions comprise around 80 percent of ovarian tumours and of those 15% are teratomas.^{1,2} In literature only 9 cases of granulosa cell tumour and dermoid cyst involving the same ovary have been reported.³

Case Presentation

A 28 years old female patient presented with lower abdominal pain. On ultrasonography, a 12.0 cm left adnexal complex cystic and solid mass was noted. The tumour was resected and sent for histopathology. Gross examination showed pale yellow solid and cystic mass measuring 12.0x9.5x7.5cm in overall dimensions. The solid component measured 9.0x8.5cm with focal areas of hemorrhage. A minor cystic component containing cheesy material and hair was also identified and measured 3.5x3.0cm. Representative sections from both solid and cystic areas were submitted.

The microscopic examination of the solid component revealed round to oval monomorphic tumour cells arranged in microfollicular

RARE OVARIAN TUMOUR IN A YOUNG FEMALE;

GRANULOSA CELL TUMOUR ARISING IN AN OVARY WITH MATURE CYSTIC TERATOMA, A CASE REPORT

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ABSTRACT... Granulosa cell tumour (GCT) along with concurrent dermoid cyst involving the same ovary is very rare. Nine such cases have been reported in the literature. Most of the reported cases are seen in older patients. Here we present a case of a young female with granulosa cell tumour and dermoid cyst in the same ovary.

Key words: Granulosa Cell Tumour (GCT), Mature Cystic Teratoma.

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structures, trabeculae and sheets ("watered-silk" pattern). Nuclei were coffee bean shaped with nuclear grooves. No significant mitotic activity or necrosis was identified. The sections of cystic area showed keratinizing squamous epithelium along with sebaceous glands and hair follicles. Based on the overall findings a rare diagnosis of granulosa cell tumour arising in an ovary with mature cystic teratoma was rendered.

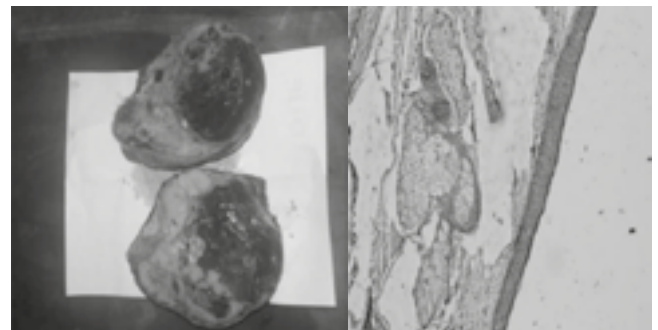


Figure-1. Gross Appearance of specimen showing solid & cystic areas with cheesy material & hair (Left). High power view of cystic area shows keratinizing squamous epithelium with sebaceous material & hair follicles (Right). (H&E, Magnification x20)

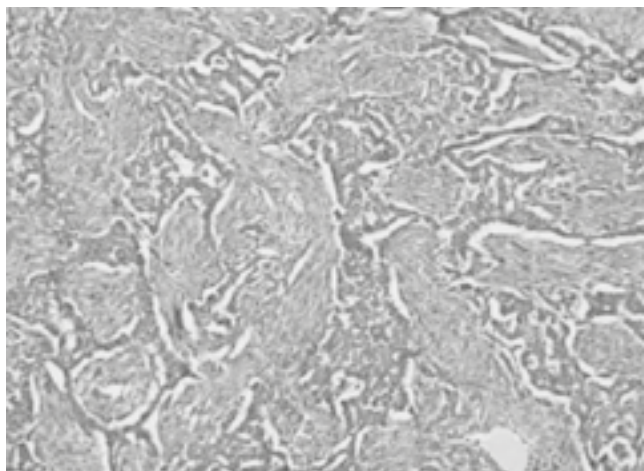


Figure-2. High power view of solid area shows Granulosa Cell Tumour. (H&E, Magnification x20)

DISCUSSION

Granulosa cells tumour is a low grade malignancy.⁴ Granulosa cell tumour arises from sex cord stromal cells whereas teratomas arise from germ cells.⁵ The GCT should be differentiated from carcinoma, carcinoid tumour, fibrothecoma and endometrial stromal sarcoma. However, the presence of Call Exner bodies and coffee bean nuclei with nuclear grooves help in making the diagnosis of GCT.⁶ In difficult cases immunohistochemical stains can be used as GCT like other sex-cord stromal tumors are usually positive for inhibin and calretinin. The overall prognosis of GCT depends on the stage of the tumour, size and grade of the tumour, mitotic activity and nuclear atypia and age of the patient.⁷ Tumour stage being the most important prognostic factor. Ten year survival is 87.2%, 75%, 20% and 0% for stage 1, 2, 3 and 4 tumors respectively.⁸ Mature cystic teratomas are benign tumours and consist of wide variety of ectodermal, mesodermal and endodermal derivatives.⁹ The age range for the 9 similar cases described in the literature is 14 to 69 years.^{1,3,10,11} Our patient was 28 years old falling in the reported age range. Four cases of GCT with contralateral ovarian teratoma in women of age range 42 to 67 years have also been reported.¹² GCT tumour may recur after many years so long term follow up is required.^{2,13}

CONCLUSION

We are reporting a rare case of young female having ovarian tumour showing histologic

features of both Granulosa cell tumour (GCT) and dermoid cyst in the same ovary.

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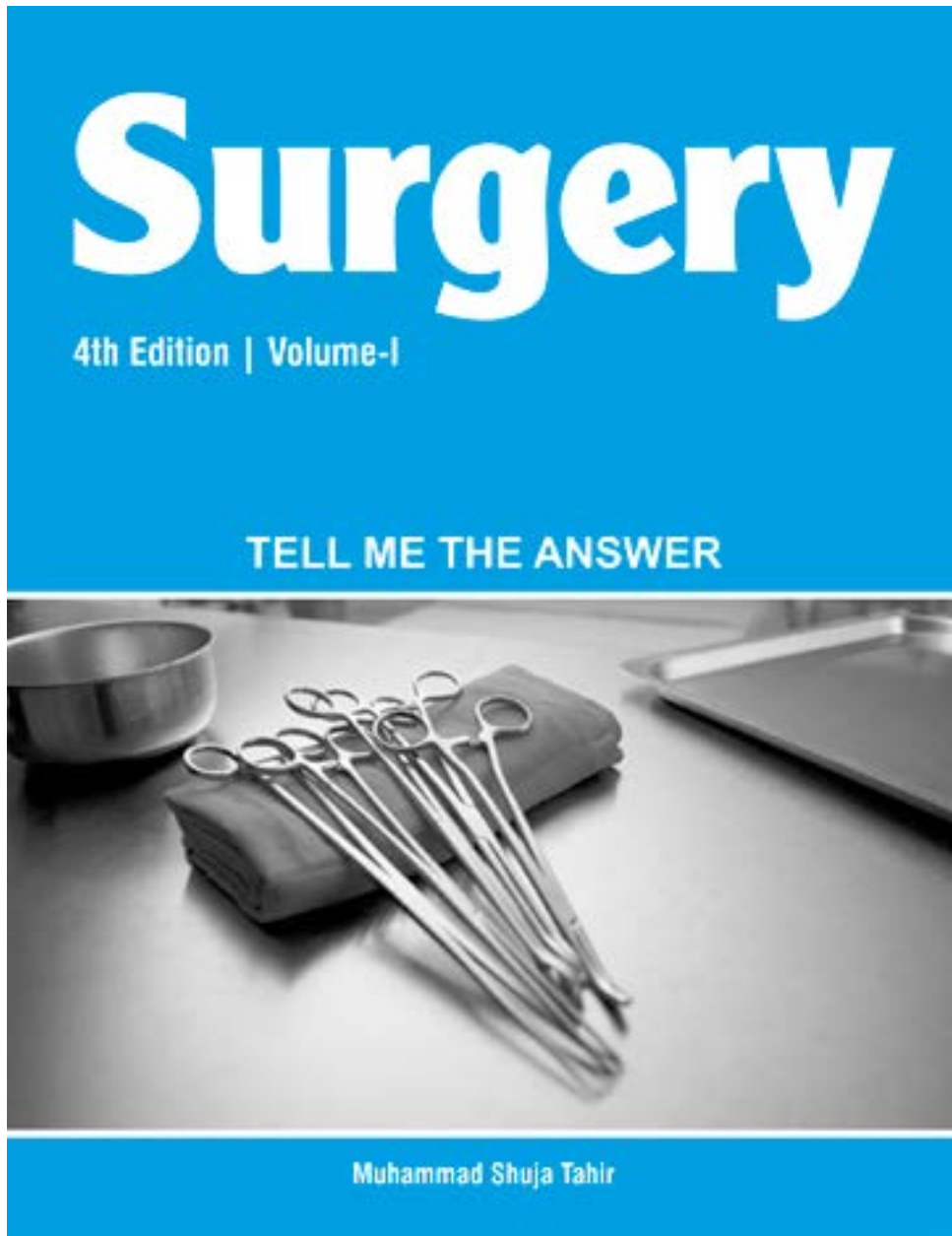
REFERENCE

1. Thompson JP, Dockerty MS, Symmonds RE. **Granulosa cells carcinoma arising in a cystic teratoma of ovary.** *Obstet Gynecol* 1966; 28: 549-52.
2. Spencer HW, Mullings AM, Char G, Carpenter R. **Granulosa –theca cell tumour of the ovaries. A late metastasizing tumour.** *West Indian Med J* 1999; 48:33-58.
3. Dgani R, Rozenman D, Lifschitz- Mercer B. **Granulosa cell tumor arising in an ovary with mature cystic teratoma.** *Int J Gynaecol Obstet* 1993; 3: 287-9.
4. Trivedi P, Patel T, Jain R, Parikh B, Dave P. **Granulosa cell tumour arising in an ovary with mature teratoma.** *Indian J Pathol Microbiol.* 2009 Oct-Dec; 52(4): 59-60.
5. Yoshino K, Fujita M, Shiki Y, Kawano K, Yamasaki M. **Granulosa cell tumour co-existing with a mature cystic teratoma of the ovary.** *J Obstet Gynaecol* 2003 May; 23(3): 318-9.
6. Adhikari RC, Jha A, Shayami G. **Granulosa cell tumor of the ovary: A clinicopathological study of six cases.** *J Pathol Nepal.* 2011; 1:96–9.
7. Lee IH, Choi CH, Hong DG, Song JY, Kim YJ, Kim KT, et al. **Clinicopathologic characteristics of granulosa cell tumors of the ovary: A multicenter retrospective study.** *J Gynecol Oncol.* 2011; 22:188–95.
8. Sekkate S, Kairouani M, Serji B, Tazi A, Mrabti H, Boutayeb S, et al. **Ovarian granulosa cell tumors: A retrospective study of 27 cases and a review of the literature.** *World J Surg Oncol.* 2013; 11:142.
9. Moid FY, Jones RV. **Granulosa cell tumor and mucinous cystadenoma arising in a mature cystic teratoma of the ovary: A unique case report and review of literature.** *Ann Diagn Pathol* 2004 April; 8(2):96-101.
10. Char G, Ramjit C, Fletcher H, Harvey W. **Granulosa cell tumour of the ovary with bilateral mature cystic teratomas.** *West Indian Med J* 2004; 53:135-7.
11. Chuang SS. **Granulosa cell tumor and dermoid cyst. Report of one case.** *Changgeng Yi Xue Za Zhi* 1995; 18:176-179.
12. Balat O, Aydin A, Kutlar I, et al. **Ruptured granulosa cell tumor of the left ovary and mature cystic teratoma of the right ovary :A case report of an usual acute abdominal syndrome.** *Eur J Gynaecol Oncol* 2001;

22:350-351.

outcome for the Radiumhemmet series. Acta Obstet Gynecol Scand 1980; 59: 361-5.

13. Bjorkholm E, Petterson F. **Granulosa-cell and theca-cell tumors. The clinical picture and long-term**



AUTHORSHIP AND CONTRIBUTION DECLARATION

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