



GYNANDROBLASTOMA: AN EXTREMELY RARE CASE

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INTRODUCTION

Gynandroblastoma is a rare tumor that shows histologic features of both a granulosa-theca cell and a Sertoli-Leydig cell (androblastoma) tumor, which, when functional, is often masculinizing.[1]Although originally thought to be a teratoma, it is now held that gynandroblastoma may arise from undifferentiated gonadal mesenchymal tissue, which is believed to be able to mature into either male or female sex-cord stromal structures.[2]It has also been reported to occur in the ovary usually, rarely in the testis but has been reported with juvenile-type granulosa cells.[3,4] Only scattered reports of “true” gynandroblastoma are present in the literature, to our knowledge. Tumor should contain more than 10% of the minor component to warrant the diagnosis of Gynandroblastoma.[5,6] The confusion with collision tumors, SertoliLeydig tumors that have focal areas resembling granulosa cell elements, that historically have led to an overdiagnosis ofGynandroblastoma.[7]

CASE REPORT

We present a case report of 45 years old female, presented in gynaecologydept of our institute with complain of irregular bleeding per vaginum (dysfunctional uterine bleeding). Patient underwent bilateral salpingoophrectomy-hysterectomy.

Gross findings

Specimen was received as uterocervix with bilateral adnexa. Both fallopian tubes measuring 6 cm. Both ovaries measuring 3×2×1 cm. Cut surface of each ovary was solid grey-white. One ovary (right sided ovary) showing a small area having ill defined yellowish nodule. Uterocervix and both tubes and left sided ovary was grossly unremarkable[Figure- 1,2]

Microscopic features

Standard pieces were taken from representative areas and slides were stained with H & E stain. Microscopic feature shows three components- granulosa cells, sertoli cells and stromal cell components. Granulosa cells having solid nests of uniform cells with scanty cytoplasm and shows mainly microfollicular pattern and occasional insular and macrofollicular pattern. The presence of numerous Call-Exner bodies gave the tumor its characteristic microfollicular appearance. Areas of granulosa cells were intermixed with cord-like structures and poorly differentiated tubular formations. Well differentiated tubular formations were present in a few small areas. Small aggregates of luteinized cells were present. The hollow tubules formed by epithelial element that have a true lumen and constituted the male or Sertoli cells component of the tumor. They formed elongated structures 2 to 3 cell thick, which resembled the tubular formation of a well differentiated arrhenoblastoma. Nodules of neoplastic tissue were separated by a edematous stroma that contained luteinized cells with pink, finely vacuolated cytoplasm resembling Leydig cells. The epithelial or sex-cord element were generally well demarcated from the stroma. But in some area it was difficult to distinguish in between the two. Basement membrane surrounding the sex-cord nest stained strongly with the PAS stain. The morphology of the stromal cells was variable and ranged from spindle fibroblast like cells to plump cells. The cytoplasm of smooth cells was generally eosinophilic. In some cases it was vacuolated and it resembles theca cells. But we use reticulin stain for differentiating this from thecoma. In our case tumor having minor component (Sertoli cell component) more than 10%. The final diagnosis was gynandroblastoma in right sided ovary. [figure: 3-10]

DISCUSSION

Despite of thorough search of literature, we found case reports on countable on fingers. The term gynandroblastoma was first used by Robert Meyer in 1930, in the discussion of a series of arrhenoblastomas reported by him, one of which had in part a histological similarity to granulosa cell tumor and was accompanied by uterine hypertrophy. [8] Plate, in 1938, collected 12 cases from the literature, which he believed could be added in this category, and added one of his own. The tumor in his case had both granulosa cell and arrhenoblastoma elements, partly separated, but with visible transitions between [9] Robert D. Neubecker and James L. Breen presented 5 cases of gynandroblastoma in their paper with histogenetic and nosologic implications of its cytologic morphology. [10] McCluggage et al in 1996 presented a case of ovarian gynandroblastoma in a 15-year-old girl. The predominant component was juvenile granulosa cell tumour. Areas of adult granulosa cell tumour and Sertoli cell elements were also present. Stromal theca and luteinised cells were identified. [11] Masaharu Fukunaga et al presented a case report with an immunohistochemical and ultrastructural study. An ovarian gynandroblastoma in a 60-year-old woman is described. The cut-surface of the right ovary showed multiple macrofollicles separated by white fibrous tissues and multiple ill-defined yellowish nodules. The turnout consisted of substantial amount of a granulosa cell element and a Sertoli cell element with intermingled Leydig cells. [12] Gómez-Macías et al (2010) describe an ovarian gynandroblastoma in a 28 year-old female patient, found accidentally during a cesarean section operation. There is only one reported case in world literature occurring in a pregnant woman. The principal component found was adult granulosa cells, with a microfollicular pattern, and the presence of luteinized cells in some areas; besides the presence of well differentiated Sertoli cells elements, in addition to Leydig cells groups, in over 10% of the tumoral surface. [13] Symptoms of both hyperestrogenism (menometrorrhagia or postmenopausal bleeding) and masculinization (breast atrophy, clitoral hypertrophy, hirsutism, and voice change) may coexist in

a patient with this type of tumor. This patient in our case, didnot manifest symptoms indicative of combinedestrogenic and androgenic stimulation.

Surgery is the most important therapeutic modality and must be conservative as possible to preserve reproductive function, it can be effectively combined with chemotherapy.[14]

CONCLUSION

Being a very rare pathological entity, this is very challenging to a pathologist to diagnose gynandroblatoma and he must have a suspicios eye while passing through a histopathological specimen of an ovary. Correct diagnosis of this tumour is very useful for patients for hormonal balance and better quality life.



Figure:1 Specimen of uterocervix with bilateral salpingoophrectomy



Figure2: Cut surface of left ovary is solid grey white and right ovary having solid tan-yellow cut surface.

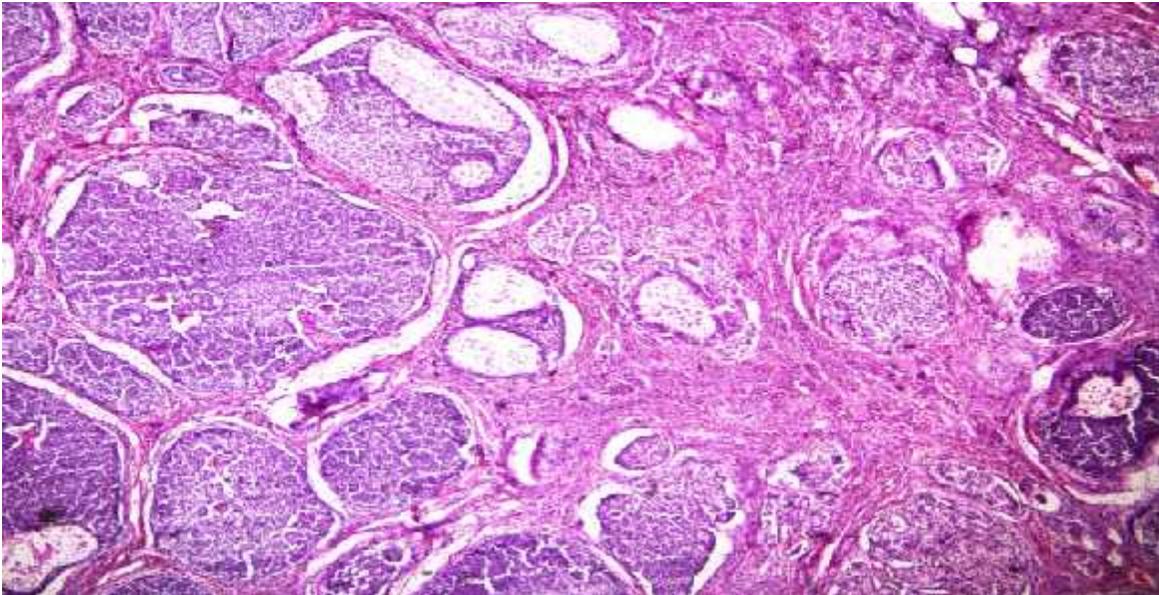


Figure 3: H&E stained section of Gynandroblastoma showing granulosa cell, sertoli cell, stromal cell components.(H&E 4X)

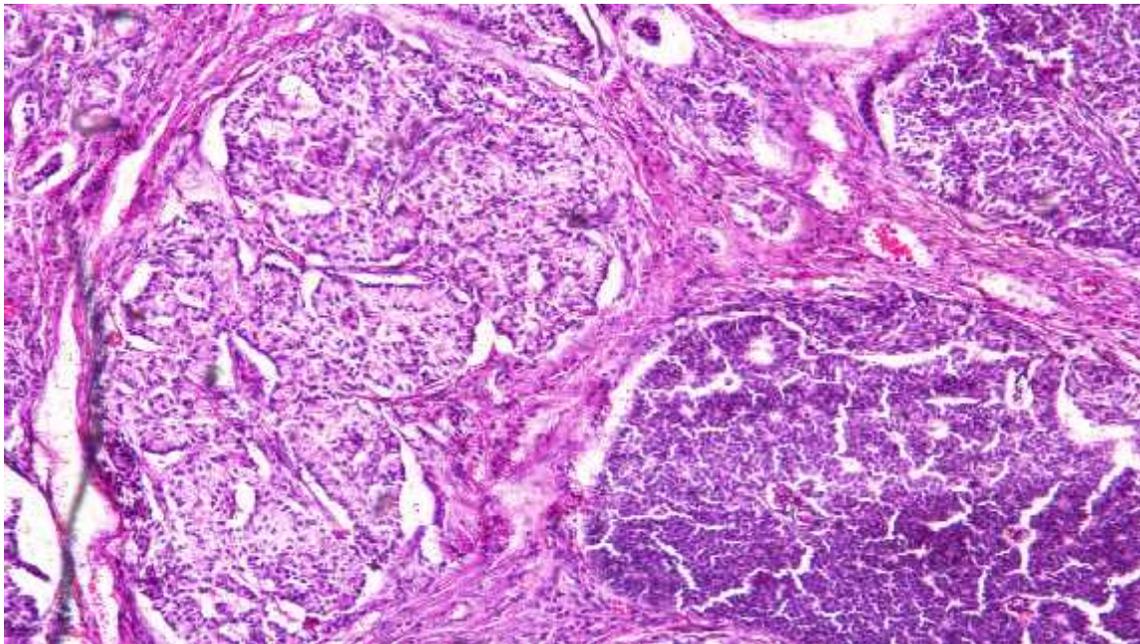


Figure4: H&E stained section of Gynandroblastoma showing granulosa cell, sertoli cell, stromal cell components..(H&E 10 X)

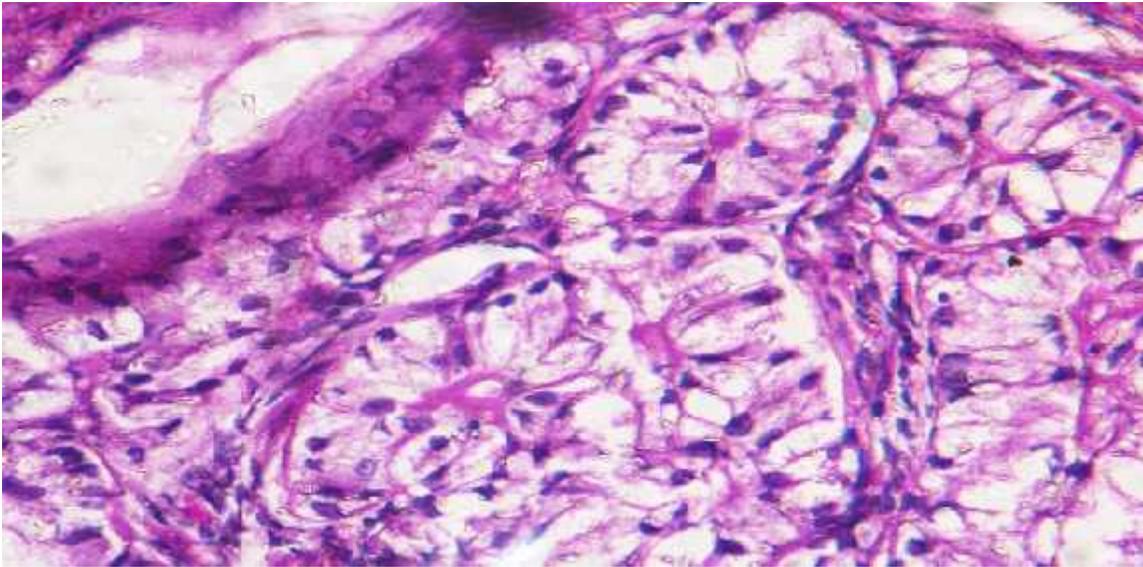


Figure 5: H&E stained section of Gynandroblastoma showing sertoli cell component. The tumor is composed of closely packed tubules lined by cuboidal to columnar epithelial cells with moderate to abundant pale eosinophilic cytoplasm. (H&E 40X)

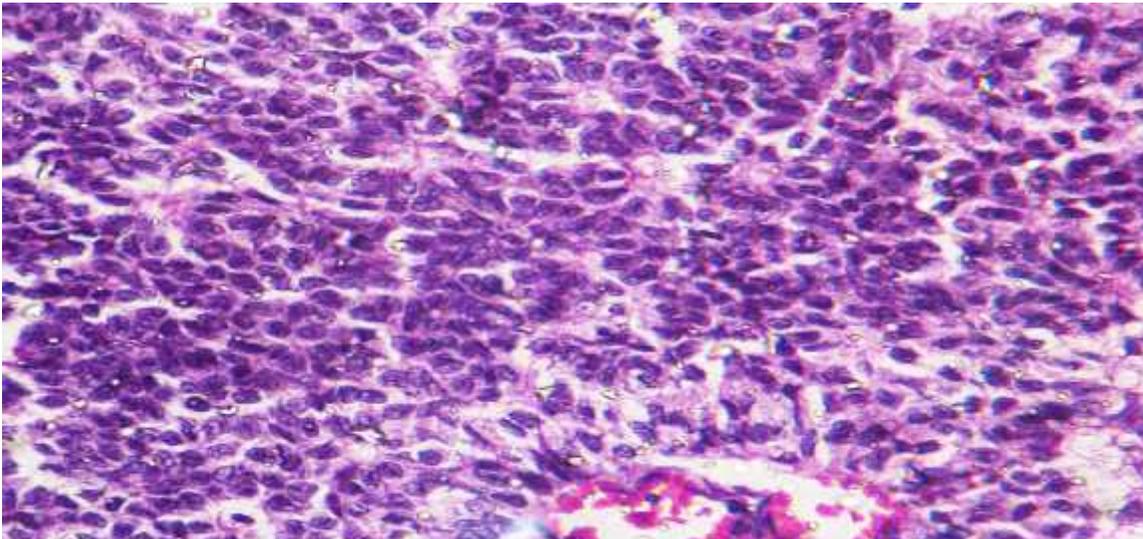


Figure 6: H&E stained section of Gynandroblastoma showing granulosa cell component. Cells arranged in microfollicular pattern showing round to oval nuclei with grooves having coffee bean appearance, inconspicuous nucleoli and Call-Exner body. (H&E 40X)

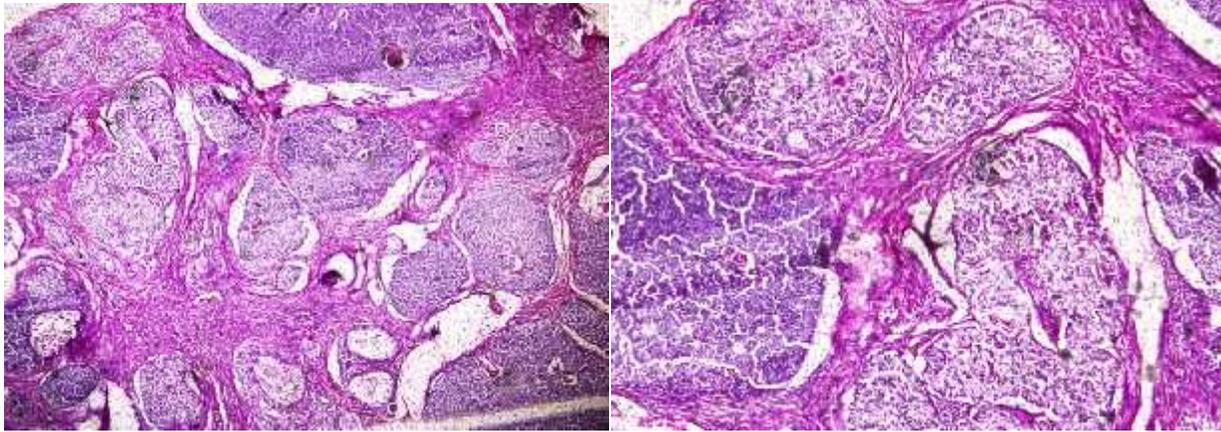


Figure 7 & 8: showing PAS stained section of Gynandroblastoma. (PAS stain 4X and 10X respectively)

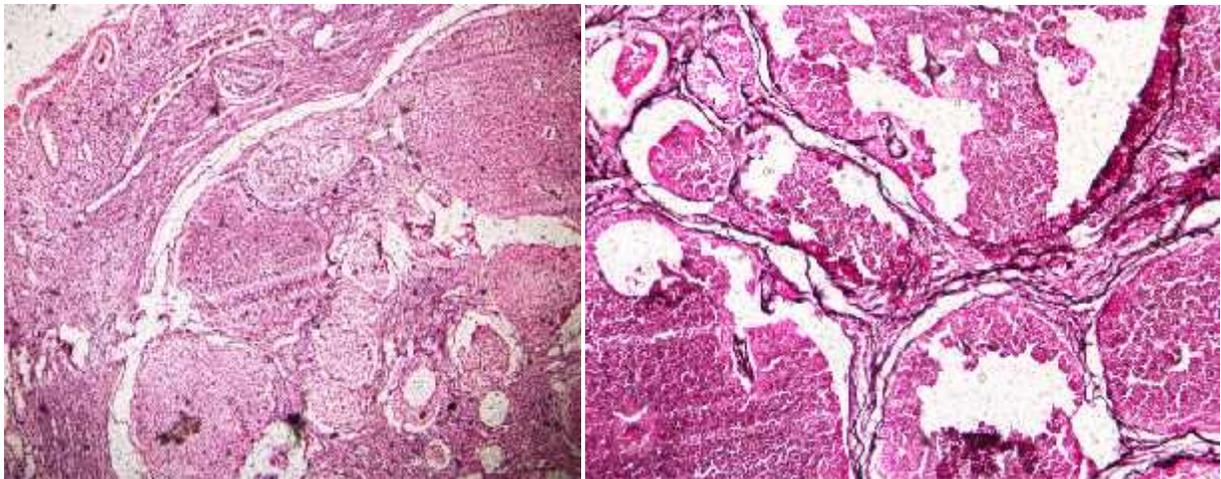


Figure 9 & 10: Reticulin stained section showing staining around group of cells of granulosa cell component. (Reticulin stain 4X and 10X respectively)

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