SJIF Impact Factor: 5.464

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 4.
Issue: 2.
Page N. 185-189
Year: 2020

Case Study www.wjahr.com

GIANT OVARIAN FIBROMA: A CASE REPORT AND REVIEW OF LITERATURE

***Akpor I. O., Vhriterhire R. A., Ojo B. A., Nyaga T., Terkula D. G. and Agwa M.**

Department of Anatomical Pathology, College of Health Sciences, Benue State University, and Benue State University Teaching Hospital, Makurdi, North Central Nigeria.

Received date: 10 February 2020 **Revised date:** 29 February 2020 **Accepted date:** 20 March 2020

***Corresponding author: Akpor I. O.**
Department of Anatomical Pathology, College of Health Sciences, Benue State University, and Benue State University Teaching Hospital, Makurdi, North Central Nigeria.

ABSTRACT

Ovarian fibroma is the most common sex-cord-stromal tumour of the ovary, with peak incidence occurring in the fourth decade of life. It may occasionally be a component of one of two syndromes, the Meig syndrome and Gorlin-Goltz syndrome. Recurrence is encountered in some cases, but a good number of those reviewed in this work did not come up with any known recurrence of the neoplasm understudied. Therefore, surgery is curative in managing most cases of fibromas of the ovary, even though the cellular fibroma may recur or form peritoneal implants at times. The report of an isolated ovarian fibroma in a middle aged woman without syndromic association has been presented in this material on account of its quite alarming gross size, yet benign histological nature, following an initial impression of suspected malignancy. Marked improvement of the symptoms after surgical intervention was affirmed by the patient on follow up visits.

KEYWORDS: *Giant Ovarian mass, Benign tumour, Fibroma.*

INTRODUCTION

Ovarian fibroma is described as a non-functioning tumour and is adjudged to be the commonest sex-cord-stromal tumour although rare in the general picture of ovarian neoplasms. With incidence at its peak in the fourth decade of life,[2,3] it can sometimes be a component of two known syndromes – the Meig and Gorlin syndromes. Usual elements of Meig's syndrome are ascites, right sided hydrothorax, and ovarian fibroma, whereas the Gorlin syndrome (also known as basal cell nevus syndrome) comprises odontogenic keratocysts, several basal cell carcinomas in early life, haemorrhagic pitting of the palms and soles, falx cerebri calcification, skeletal anomalies, and other anomalies including bilateral ovarian fibromas.[19] These types are seen in young women. Imaging modalities are helpful in making a diagnosis, but in order to eliminate the fear or suspicion of malignancy, microscopic histological examination is quite necessary and this usually reveals closely packed spindle shaped stromal cells (well differentiated fibroblasts) arranged in a storiform pattern. Between these neoplastic cells, hyaline bands and hyaline globules with oedematous foci may be seen.

The purpose of this report is to bring to the awareness of the medical community our finding of this rare gynaecological neoplasm for its alarming gross size in this patient, and yet histopathologically benign nature. Although cellular types may recur or form peritoneal implants, oophorectomy is usually curative.

CASE REPORT

A 49 year-old woman who is a military personnel and married in a monogamous setting, presented first at the gynaecological clinic of our hospital with a history of progressive abdominal distension for 9 months. Her last child birth was ten years ago, and she is a Para.[1+4] (1 Alive). This huge abdominal mass was associated at the onset with pain that was constant and severe enough to sometimes interfere with function, but was relieved by taking an analgesic (paracetamol). Also associated were reported histories of menorrhagia, intermenstrual bleeding, and dysmenorrhea. However, vomiting, constipation, diarrheal stools or malaena were not part of her presentation.

This client has had three (3) previous myomectomy surgeries as indicated for recurrent uterine leiomyoma (fibroid tumours).

Physical examination of the patient showed a chronically ill-looking middle aged woman that is pale, anicteric, afebrile, and not dehydrated, but has bilateral pitting lower limb oedema up onto the knees. The abdomen is

markedly distended with a girth of about 123cm, and shows striae albicantes (stretch marks) and a midline healed infraumbilical scar. The abdominal organs or viscera were difficult to palpate or get below on account of the intra-abdominal mass, which was equivalent to a symphysio-fundal height (SFH) of 64cm.

The lungs demonstrated fine crepitations heard over the mid lung zones bilaterally, which were louder on the right, but no pleural effusion was demonstrated on chest radiographs.

Speculum and digital examinations of the vagina revealed a nulliparous-like cervix that is firm, appears healthy, and central with a closed os. The pouch of Douglas is empty, but fullness is felt in the anterior vaginal fornix, and the uterine size was difficult to assess due to the abdominal distension. The uterine adnexae were difficult to characterize, and no cervical excitation tenderness was elicited, but the gloved finger was mildly blood stained.

Investigation findings gave an initial packed cell volume (PCV) of 24.9% and haemoglobin concentration of 7.3 g/dL. Abdominopelvic ultrasound and CT scans revealed ascites, a huge heterogenous (complex) right adnexal mass, with areas of cystic degeneration. Hepatitis B infection was positive, but patient is not reactive to hepatitis C and human immune deficiency virus (HIV) tests. Some derangement in liver function is evident by an albumin level of 24 g/dL, total bilirubin of 12.1 g/dL, conjugated bilirubin 2.9 g/dL, and alkaline phosphatase of 232 IU/L. A provisional assessment was made of a complex intra-abdominal (likely right ovarian) mass, querying its nature as likely malignant.

The patient was worked up for an exploratory laparotomy in conjunction with the general surgeons. She was placed on haematinics and transfused with a unit of fresh whole blood pre-operatively. On opening her, the findings were thus: grossly normal looking abdominal organs, approximately 100 ml of ascitic fluid, a huge right ovarian mass measuring 40 x 30cm having solid and cystic components, moderate adhesions involving the tumour, anterior abdominal wall, and anterior surface of the bladder (Fig.1). Based on this a total abdominal hysterectomy plus bilateral salpingo-ophorectomy (TAH plus BSO) were performed in addition. The samples collected were preserved in 10% buffered formalin solution and sent to the histopathology laboratory, Department of anatomical pathology for processing and microscopic evaluation. The lesion was confirmed histologically to be a cellular fibroma and not a malignancy as held by prior suspicion. The symptoms have improved significantly since undertaking surgery six months ago, and the patient is on follow up without recourse to the presenting complaints.

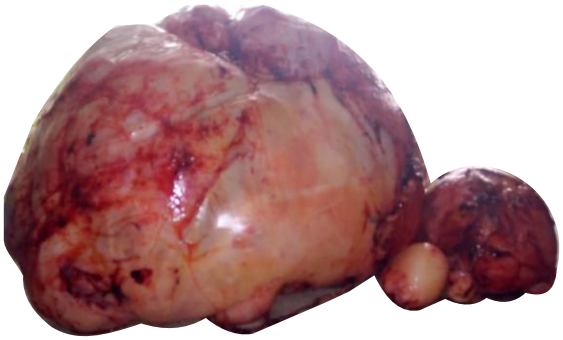

Figure 1: Gross image of a giant ovarian mass.

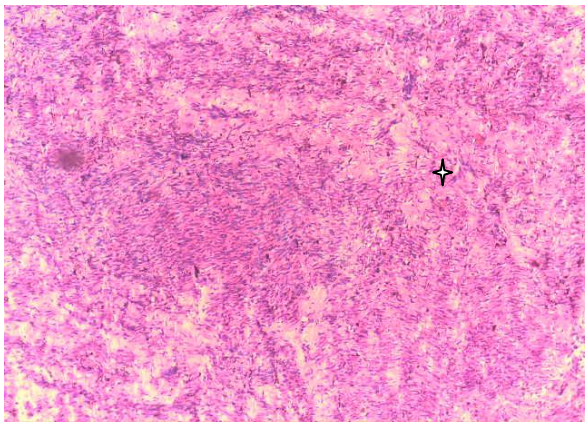

Figure 2: Photomicrograph shows bands of fibroblasts with areas of hyalinization (*) and odema (arrow). (x 10 objective H and E).

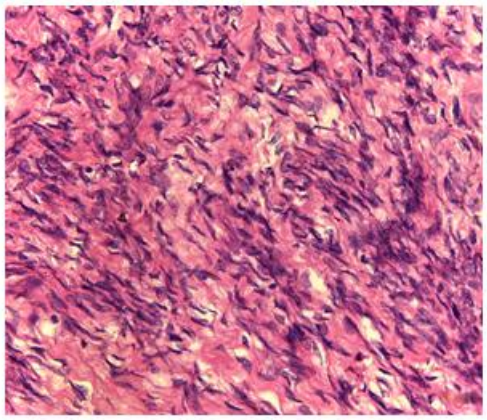

Figure 3: Photomicrograph shows a cellular fibroma containing many fascicles of mature fibroblasts. (x 40 objective, H and E).

***Table 1*: Literature Review on Ovarian Fibromas.**

Author	Year	Age (years)	Size (cm)	Duration	Symptoms Presentation	Diagnosis + Treatment	Recurrence
Arya et al[10]	2008	42	—	15	Multicystic left ovarian mass, pain and heaviness in the right lower abdomen, menorrhagia	Importance of histopathologicial examination is stressed. TAH and BSO and omentectomy	No recurrence
Cambruzzi et al[5]	2010	65	23x22	Few months	Palpable mass in hypogastrium (right ovary)	Angiosarcoma confirmed within an ovarian fibroma; Exploratory laparotomy	—
Adad et al[1]	2012	53	27x27	8months	Abdominal distension, nausea, vomiting, ascites, ovary mass 6.6kg	Histological and immunohistochemistry; TAH	No sign of recurrence after 33months
Boujoual et al[13]	2015	62	10	—	Nausea, vomiting, abdominal pain, abdominal mass	Histological and Immunohistochemical; TAH and BSO	—
Katke RD[17]	2016	32	15x12	6	Abdominal pain , secondary infertility,left ovarian mass	Histological; salpingo-ophorectomy	No recurrence
Hanna et al[6]	2017	17	—	—	Abdominal swelling, fatique mass had cystic and solid components, dense adhesions	Histological; extensive adhesiolysis plus left-salpingo-ophorectomy	No recurrence
Moukit et al[14]	2018	43	44x32	7months	Giant mass (right ovary)	TAH and BSO	—
Shen et al[11]	2018	Mean 49.37	—	—	Pelvic mass	Histological; primary surgery done	No recurrence 45months post op
Limaiem et al[16]	2018	Mean 42	Mean 8.77	—	Pelvic pain, mass, menorrhagia perimenopausal bleeding	Histological confmirmation in all cases. Tumorectomy, unilateral salpingo-ophorectomy and BSO	No recurrence after 17months
To et al[7]	2019	39	19x14	3	Right ovary mass	Histological; right salpingo-ophorectomy	—
Akpor et al	2020	49	40x30	9months	Gross abdominal swelling, intermenstrual bleeding, dysmenorrhea	Histological; TAH and BSO	No recurrence

Keys: BSO- bilateral salpingo-ophorectomy, TAH- total abdominal hysterectomy

DISCUSSION

This particular tumour has been introduced as the commonest tumour of the ovarian sex cord stroma with a peak incidence in the fourth decade of life.[1,2,3] The patient in our report is however in her fifth decade, with a very low parity. There are just few case reports or large studies on this entity and, the mitotically active cellular fibroma is even rarer.[4] Hence optimal and adequate management may be largely undecided or undetermined when clinicians encounter this neoplasm.[9]

Among the known symptoms, a rather rapid growth rate and increase in tumour size within a relatively short period of time has led to a misdiagnosis or overdiagnosis as leiomyoma in some cases that were later confirmed histologically as ovarian fibroma.[4,7] It resembles uterine leiomyoma grossly as many fibromas of the ovary tend to present or appear as leiomyoma with a greyish white, whorled solid surface.[1,8,11,12] Other forms of presentation include fatigue and abdominal swelling due to a grossly large tumour size in much younger patients like teenagers and adolescents (see table 1), which is one unusual finding observed by Hana et al.[6] The woman in our report has a quite grossly large tumour (over 40cm and weighed 18kg), but is in her fifth decade. Rupture of an adnexa (the infundibulo-pelvic ligament), leading to intra-abdominal bleeding was a unique rather unusual finding documented by To et al.[7] Otherwise ovarian fibromas are not known to be associated with abnormal abdominal bleeding or abdominal apoplexy. Many also

present as a suspected malignant tumour; therefore an initial suspicion of malignancy is occasionally entertained as is obtained in the index case and some workers have actually reported a transformation into an angiosarcoma in a prior ovarian fibroma.[5,10,11,12] This makes diagnosing this neoplasm quite challenging at the preclinical and clinical stages of presentation, as it is not usually done accurately until intraoperative and histopathological evaluation have been employed.[18] When it is associated with pleural effusion (right sided normally), and massive ascites, the condition is labeled as Meig syndrome.[15] Another syndromic association is the Gorlin-Goltz syndrome. The patient we report however, has a non-syndromic very large or giant ovarian fibroma in her right ovary, without ipsilateral pleural effusion and only 100ml of ascitic fluid. This is similar to (or mirrors) the case reported by Moukit et al.[14] The histological morphology of the tumour shows numerous bundles of fibrous tissue, admixed in many areas with densely cellular and proliferating fascicles of fibroblastic and fibrocytic cells, foci of hyaline change and oedema. No malignant cells are present (figures 2 and 3).

The treatment is largely almost predominantly surgical and consists of salpingoophorectomy, following an initial exploratory laparotomy. Our patient had a total abdominal hysterectomy plus bilateral salpingo-ophorectomy. She had been on follow up and monitoring over a period of eight months from the date of discharge, and has confirmed significant improvement, and no recurrence is reported.

CONCLUSION

Fibromas are the most common benign tumours of the sex-cord stromal tissue in the ovaries, and are not usually markedly enlarged. On rare occasions nonetheless, few have assumed alarmingly massive size to warrant a suspicion of malignancy, but histological examination shows them to be just giant fibromas as we have reported. Surgery is readily curative.

CONFLICT OF INTEREST

The authors of this report have no conflict of interest to declare.

CONSENT

Informed consent was sought and obtained from the patient concerned to have this work published.

REFERENCES

1. Adad SJ, Laterza VL, dos Santos CD, Ladeia AA, Saldanha JC, da Silva CS et al. Cellular Fibroma of the Ovary with Multiloculated Macroscopic Characteristics: Case Report. J Case Reports in Medicine, 2012; 2012: 3948. Article ID283948, 5pages http://dx.doi.org/10.1155/2012/283948.
2. Bitterman P. Female Reproductive System, In: Gattuso P, Reddy VB, David O, Spitz DJ, Haber MH, editors. Differential Diagnosis in Surgical Pathology. 2nd edition. Philadelphia: Elsevier-Saunders, 2010; 665-666.
3. Ellenson LH, Pirog EC. The Female Genital Tract, In: Kumar V, Abbas AK, Aster JC, editors. Pathologic Basis of Disease. 9th edition. Philadelphia: Elsevier-Saunders, 2015; 1032-1033.
4. Matsuda K, Tateishi S, Akazawa Y, Kinoshita A, Yoshida S, Morisaki S, et al. Rapid growth of a mitotically active cellular fibroma of the ovary: a case report and review of literature. Diagn Pathol, 2016; 11: 101.
5. Cambruzzi E, Pegas KL, Milani DM, Cruz RP, Guerra EH, Ferrari MB. Angiosarcoma Arising in an Ovarian Fibroma: A Case Report. Pathology Research International, 2010; 2010. Article ID842592, 4pages doi:10.4061/2010/842592.
6. Hanna M, Loveless M, Abraham M, Bonagura E, Polis R, Hertweek SP. Ovarian fibroma and the association with Gorlin syndrome: A case report and review. Poster Abstracts/J Pediatr Adolesc Gynecol, 2017; 30: 299-300.
7. To J, Li C. Spontaneous Abdominal Bleeding from an Infundibulopelvic Ligament Tear in a Patient with Large Ovarian Fibroma. Case Reports in Obstetrics and Gynecology, 2019; 2019. Article ID9834915, 3pages https://doi.org/10.1155/2019/9834915.
8. Shetty RK, Desai SK, Kania PM, Chandak SK. A case of ovarian fibroma masquerading as a uterine fibroid. Int J Reprod Contracept Obstet Gynecol, 2016; 5(12): 4515-4518.
9. Kulkarni R, Bhat R, Dhakharia V, Gangoli A, Sharma K. Mitotically active cellular fibroma of the ovary: a rare case and review of literature. South African Journal of Gynaecological Oncology, 2017; 9(2): 19-21.
10. Arya A, Rao S, Agarwal S, Arora R, Gupta K, Dhawan I. Ovarian fibroma: An unusual morphological presentation with elevated CA-125. Indian J Pathol Microbiol, 2008; 51(4): 523-4.
11. Shen Y, Liang Y, Cheng X, Lu W, Xie X, Wan X. Ovarian fibroma/fibrothecoma with elevated serum CA-125 level; A cohort of 66 cases. Medicine. 2018; 97: 34(e11926) http://dx.doi.org/10.1097/MD.0000000000011926
12. Najmi Z, Mehdizadehkashi A, Kadivar M, Tamannaie Z, Chaichian S. Laparoscopic Approach to a Large Ovarian Fibroma: a Case Report. J Reprod Infertil, 2014; 15(1): 57-60.
13. Boujoual M, Hakimi I, Kouach J, Oukabli M, Moussaoui DR, Dehayni M. Large twisted ovarian fibroma in a menopausal woman: a case report. Pan African Medical Journal, 2015; 20: 322.5998. Available online at http://www.panafrican-med-journal.com/content/article/20/322/full/.
14. Moukit M, El-Hassani E, Cherrabi F, Babahabib A, kouach J, Moussaoui D. Giant ovarian fibroma

mimicking a subserous uterine myoma: A case report. European Journal of Pharmaceutical and Medical Research, 2018; 5(9): 147-150.
15. Antunes M, Pizzol D, Zambon M, Colangelo AC. Giant ovarian fibroma with associated Meig's syndrome in low resource setting. Journal of Surgical Case Reports, 2019; 2019(4): rjz143 https://doi.org/10.1093/jscr/rjz143.
16. Limaiem F, Sassi A, Bouraoui S. Ovarian Fibromas; A Clinicopathological Study of 18 Cases. International Journal of Innovative Studies in Medical Sciences, 2018; 2(1): 8-12.
17. Katke RD. Ovarian Fibroma in A Young Woman with Infertility Mimicking Uterine Fibroid. Journal of Case Reports, 2016; 6(1): 120-123.
18. Yildirim N, Saatli B, Akalin F, Ulukus C, Obuz F, Saygili U. Mitotically active cellular fibroma of the ovary: A case report. J Turk Soc Obstet Gynecol, 2015; 1: 53-55.
19. Rosai J, Ackerman, Lauren. Female Reproductive System-Ovary. Rosai and Ackerman's Surgical Pathology. Tenth edition. Philadelphia: Mosby-Elsevier, 2011; 1595-1597.