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Case Report

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ADRENAL MYELOLIPOMA IN A 45 YEAR OLD FEMALE: A CASE REPORT

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ABSTRACT

Myelolipoma is a rare benign tumour. They are often asymptomatic, unilateral and non-secreting. Myelolipomas can be adrenal as well as extra adrenal. Advanced imaging modalities, biochemical studies and clinicohistopathological correlation, has led to early diagnosis and hence, increased incidence of these tumours. **Case Presentation:** We report a case of a 45 year old female from Lucknow, who presented with pain in the right side of abdomen. USG Abdomen showed an echogenic oval lesion suggestive of Haemangioma liver/ right adrenal. CECT Abdomen showed a well defined fat density globular lesion in right adrenal area. Urinary cateholamines and metanephrines were normal. HR USG Neck and FNAC Neck swelling were suggestive of MNG. Patient was operated and right adrenalectomy with excision of the tumor was done. **Conclusion**: Adrenal myelolipomas are rare benign tumours. Many a times, they are incidentally diagnosed, thereby, require careful diagnostic plans, scrupulous histopathological examination and timely treatment.

KEYWORDS: Myelolipoma, Adrenal gland, incidentaloma.

INTRODUCTION

Myelolipoma (myelo, meaning marrow; lipo, meaning of, or pertaining to, fat; - oma, meaning tumor or mass) is a benign tumor-like lesion composed of mature adipose (fat) tissue and haematopoietic (blood-forming) elements in various proportions. Myelolipomas can present in the adrenal gland,[1] or outside of the gland.[1] Extra-adrenal myelolipoma may occur in the retroperitoneum, pelvis, stomach, liver, lung, presacral area and in 3% of cases in the mediastinum. They have been found to be asymptomatic and but have been reported to present with symptoms such as flank pain due to tumour bulk, necrosis or spontaneous retroperitoneal haemorrhage or hematuria.[2]

CASE REPORT

A 45 year old female from Lucknow presented with chief complaints of pain in the right side of abdomen since 1 year which was insidious in onset, dull aching, continuous, mild intensity, radiating to flank and relieved with oral medication. She also had lower midline neck swelling since 3 years. On examination, her general condition was fair, normal blood pressure, normal, regular pulse rate with adequate volume on bilateral examination, other organ systems were normal. Abdomen was soft, non tender with no organomegaly/Lump. Liver function tests, Serum Urea, Creatine, Serum Electrolytes, thyroid function tests were within normal limits. USG Abdomen showed an echogenic oval lesion measuring 8.3x6.9x8 cm suggestive of Haemangioma liver/ right adrenal. CECT Abdomen showed a well defined fat density globular lesion measuring approximately 10x7.4x6.4 cms seen in right adrenal area.

Right adrenal gland was not visualize separately from lesion. Right kidney was displaced inferiorly suggestive of Adrenal myelolipoma. Urinary catecholamines and metanephrines were normal. HR USG Neck and FNAC Neck swelling were suggestive of MNG. Patient was operated and right adrenalectomy with excision of the tumor was done. Post-op course was uneventful and patient was discharged on 4th post-op day. Gross examination showed a large, globular partially encapsulated, well circumscribed tumour mass with smooth external surface, measuring 10x6.5x3 cms, weighing approximately 650gm. Cut section showed a solid tumour with a homogenous appearance showing predominantly yellowish areas along with dark red haemorrhagic or congested areas in the periphery. Figure 1. The microscopic features shows a characteristic admixture of mature adipose tissue and normal haematopoietic tissue. Figure 2 The hematopoietic tissue comprises of trilineage maturation of the three major

blood-forming elements: myeloid (white blood cell forming), erythroid (red blood cell forming), and megakaryocytic (platelet forming) series. Figure 3. A thin rim of normal adrenal cortical cells was identified at the periphery of the lesion. Figure 4. Differential diagnosis considered included several fat-containing lesions, such as Angiomyolipoma, Retroperitoneal liposarcoma or lipoma, and are more frequently encountered in extra-adrenal sites, kidney, or perirenal fat and Extramedullary Hematopoeisis.

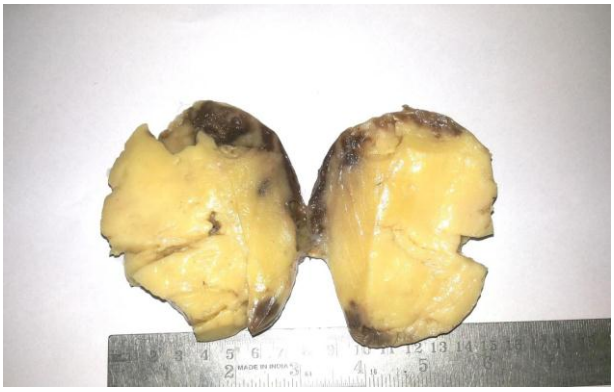
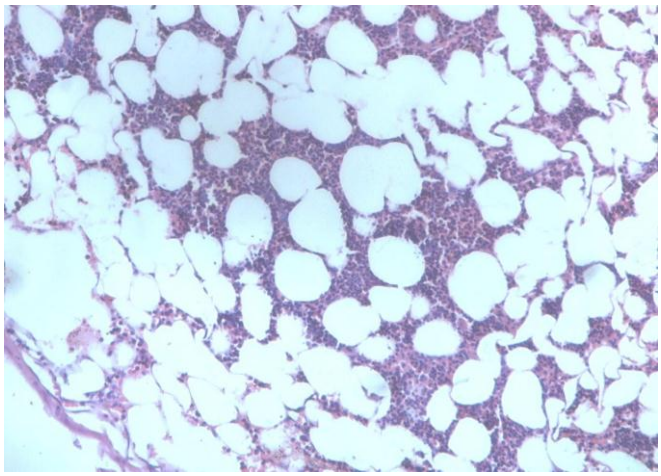


Figure 1:



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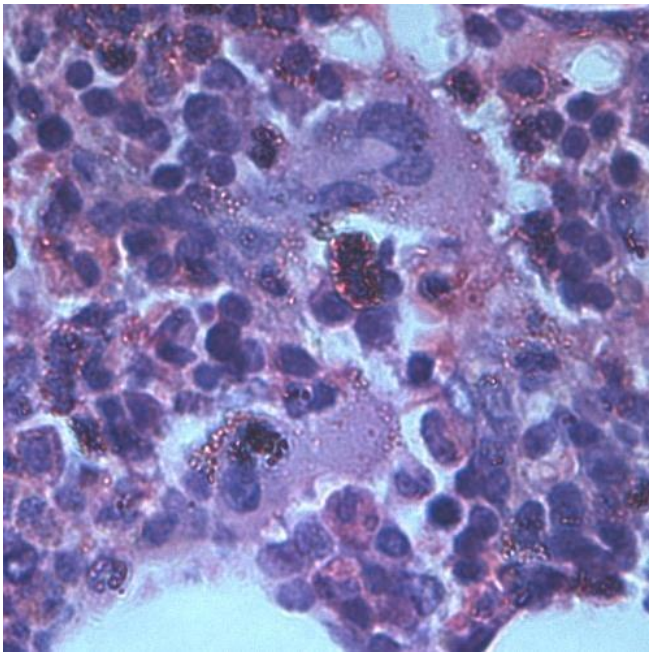

Figure 3:

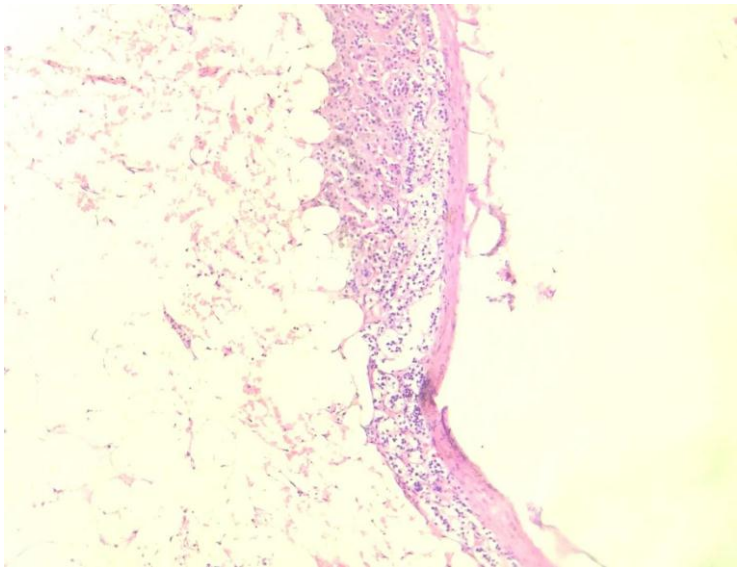

Figure 4:

DISCUSSION

Myelolipomas account for 3–5% of all primary tumors of the adrenal glands. Incidence is approximately 0.08%–0.4%, with increased incidence in the later decades of life. They comprise of 15% of adrenal incidentalomas. They present in 5th to 7th decade, and are usually solitary and unilateral. Myelolipomas occur in females more often than in males and more often in middle-aged to the elderly[3] The majority of myelolipomas are asymptomatic. Most are discovered as a result of investigation for other disorders.[2] When myelolipomas produce symptoms, it is usually because of their large size, and or due to their pressing on other organs or tissues nearby. Symptoms include pain in the abdomen or flank, blood in the urine, a palpable lump or high blood pressure.[2] Rarely, hormonally active : aldosterone secreting or catecholamines secreting adrenal tumours such as Adrenal cortical adenoma with myelolipomatous metaplasia or congenital adrenal hyperplasia, and occasionally, infarction, hemorrhage, or bony metaplasia can be seen. As they are benign tumors, myelolipomas do not spread to other body parts. Larger myelolipomas are at risk of localised tissue death and bleeding, which may cause a retroperitoneal haemorrhage.[2]

There have been many theories proposing the origin of adrenal myelolipoma. Olobatuyi FA et al stated that adrenal cortical cells, or other cells within the stroma of the adrenal cortex that are able to differentiate, may reversibly change into fat or blood-forming cells. This may be due to the actions of adrenal cortex hormones, or of hormones released by the pituitary gland that act on the adrenal glands, such as adrenocorticotropic hormone (ACTH). Also, blood-forming cells may arise by differentiation of cells within the capillaries of the adrenal gland.[4]

Recent experimental evidence has suggested that both the myeloid and lipomatous elements have a monoclonal origin, which strongly supports the hypothesis that myelolipomas are neoplastic lesions.[5] Myelolipoma simply represents a site of normal blood formation outside the bone marrow.

Histologically,[6,7] Myelolipomas have to be distinguished from mass-forming foci of extramedullary haematopoiesis such as myeloproliferative diseases, haemolytic anaemia and severe skeletal disease. These extramedullary haematopoietic "tumours" lack fat and are ill defined. Extra adrenal myelolipomas that are usually well encapsulated and composed of variable amounts of mature adipose tissue, smooth muscle and bone marrow cells, while liposarcomas tend to be poorly marginated, have lipoblasts and show zones of cellular atypia

CONCLUSION

Adrenal myelolipomas are rare benign tumours. The adrenal gland is a rare histopathological specimen. However, adrenal nodules are frequently encountered at autopsy as incidental findings.[8] They are now been increasingly identified due to advanced imaging techniques like computed tomography or magnetic resonance imaging performed for the diagnosis of other diseases, mostly as unexpected findings. Therefore, a surgical pathologist should be aware of this entity in the adrenal gland and how to approach the specimen.[5] Surgical excision is recommended for large myelolipomas because of the risk of bleeding complications.

Abbreviations: USG – Ultrasound, MRI-Magnetic Resonance Imaging, MNG- Multinodular Goitre, FNAC-Fine needle aspiration cytology.

REFERENCES

1. Zieker D, Königsrainer I, Miller S, et al. "Simultaneous adrenal and extra-adrenal myelolipoma — an uncommon incident: case report and review of the literature". World J Surg Oncol,

2008; 6: 72.
2. Ong K, Tan KB, Putti TC (July). "Myelolipoma within a non-functional adrenal cortical adenoma" (PDF). Singapore Med J., 2007; 48(7): e200–2. PMID 17609815.
3. Ong K, Tan KB, Putti TC (July 2007). "Myelolipoma within a non-functional adrenal cortical adenoma" (PDF). Singapore Med J. 48 (7): e200–2 Chen KT, Felix EL, Flam MS. Extraadrenal myelolipoma. Am J Clin Pathol, 1982; 78: 386–389.
4. Olobatuyi FA, Maclennan GT (September). "Myelolipoma". J Urol, 2006; 176(3): 1188.
5. McNicol AM (Winter). "A diagnostic approach to adrenal cortical lesions". Endocr Pathol, 2008; 19(4): 241–251. doi:10.1007/s12022-008-9055-x. PMID 19089656. McNicol AM (Winter). "A diagnostic approach to adrenal cortical lesions". Endocr Pathol, 2008; 19(4): 241–251.
6. Kammen BF, Elder DE, Fraker DL, Siegelman ES: Extraadrenal myelolipoma: MR imaging findings. AJR Am J Roentgenol, 1998, 171: 721-723.21.
7. Liang EY, Cooper JE, Lam WW, Chung SC, Allen PW, Metreweli C: Case report: myolipoma or liposarcoma--a mistaken identity in the retroperitoneum. Clin Radiol, 1996; 51: 295-297.
8. Pascual G, X, Bujons TA, Rodriguez FO, Gomez Ruiz JJ, Palou RJ, Villavicencio MH. [Extraadrenal perirenal myelolipoma: report of a case and review of the literature] Actas Urol Esp, 2007; 31: 932–934.