
Original Research Article

Adrenal Myelolipoma: Report of 2 Cases of a Rare Tumour

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Abstract

Introduction: Myelolipoma was described initially by Gierke in 1905 and the term was coined by Obenling in 1929. These are rare benign tumours of the adrenal gland with a cited estimated autopsy prevalence of 0.1-0.2%.

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Materials and methods: Two cases have been reported. The first case was a 39 year old female patient and second case, a 42 year old female patient. Adrenalectomy was the surgical procedure done. On gross examination, Case 1 adrenal tissues measured 9 x 6 x 4 cm. Cut surface was firm, brownish coloured with yellowish areas in between. Case 2 tissue measured 7x6x4 cm. Cut surface was firm, brownish with yellowish areas.

Result: In both cases Hematoxylin & eosin stain of sections showed mature adipose tissue with scattered hemopoietic cells. Morphology favoured adrenal myelolipoma.

Conclusion: We conclude that adrenal myelolipomas are small and rare tumours. Myelolipomas are usually asymptomatic and must be monitored clinically for symptoms; routine follow-up imaging studies appear unnecessary for such lesions. Histomorphology suffices for diagnosis.

Keywords: Adrenal; Myelolipomas Adipose Tissue; Hemopoietic Cells; Histomorphology.

Introduction

Myelolipoma was initially described by Gierke [1] in 1905 and the term coined by Obenling in 1929 [2].

Myelolipomas of the adrenal gland are rare benign tumours of the adrenal gland. An estimated autopsy prevalence of 0.1-0.2% has been cited [3].

These tumours can occur in isolation or as a part of systemic syndromes; are found incidentally and are asymptomatic.

Most of them are sporadic and they are often

solitary.

They occur four times more frequently in women than in men, with a mean age at presentation of 40 years [4].

Methods and Materials

Two cases are being reported. The first case was a 39 year old female patient and second case, a 42 year old female patient.

Adrenalectomy was the surgical procedure done.

Histopathological examination with haematoxylin and eosin method was done.

Results

Gross examination

Case 1:

Tissue from adrenal mass was received. The adrenal tissue measured 9 x 6 x 4 cm. Cut surface revealed firm consistency, brownish coloured with yellowish areas in between. 3 sections were submitted for processing.



Case 2:

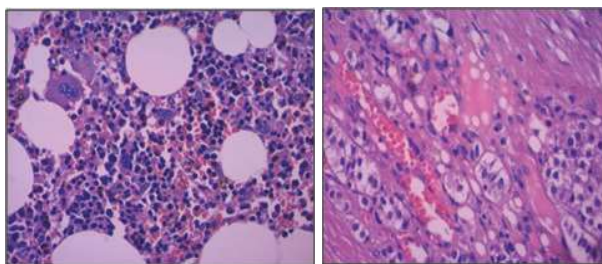
Tissue of adrenal tumour was received measuring 7x6x4 cm. Cut surface was firm, brownish with yellowish areas. 2 sections were submitted for processing



Microscopic features:

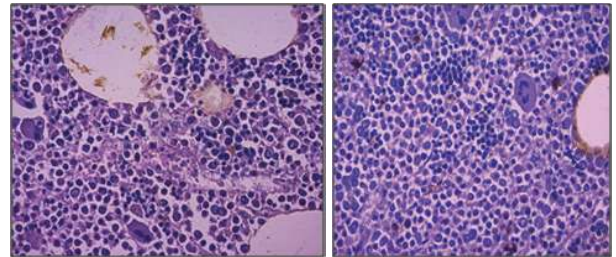
Case 1:

Haematoxylin & eosin stain of sections show mature adipose tissue with scattered islands of hemopoietic cells. Areas of necrosis, haemorrhage, calcification and cystic changes seen. Morphology favours adrenal myelolipoma.



Case 2:

Haematoxylin & eosin stain of section shows mature fat containing bone marrow elements with normal hematopoietic elements. Morphology consistent acute myelolipoma.



Discussion

Differential Diagnosis

Radiologically differential considerations include: retroperitoneal liposarcoma, fat containing adrenocortical carcinoma, adrenal teratoma: extremely rare, renal angiomyolipoma (AML) [3]. Angiomyolipoma or myelolipoma of the adrenal gland has been mostly detected incidentally. These are extremely uncommon tumor, small, asymptomatic and non-functional in nature and are of established benign nature [5].

The developmental pathogenesis of these tumours remains unclear. The theory as cited by Meaglia and Schmidt [5] is the most accepted, which states "the existence of metaplasia of reticuloendothelial cells of blood capillaries in the adrenal glands, in response to stimuli, such as, necrosis, infection or stress, although there is no proven link between these conditions and myelolipomas, and diagnosis is mostly incidental".

On histopathological examination, a myelolipoma shows adipocytes interspersed with haematopoietic elements - myeloid and erythroid precursors, as well as, megakaryocytes [6]. Histomorphology remains the adequate aid in diagnosis.

A group of tumors with a diverse appearance known are PEComas (tumors of perivascular epitheloid cell origin) of which rare lesions like Angiomyolipomas form a part. Angiomyolipoma most commonly occurs in the kidney. The next common site is the liver. Extrarenal angiomyolipomas are extremely rare and have been reported in the liver, colon, suprasellar region, small intestine, skin, intranodal, omentum, breast and adrenal gland [7-11].

Conclusion

Fatty tumours of the adrenal gland are uncommon and there are only a few literatures which describe their features, namely myelolipoma, lipomas, teratoma, liposarcoma and angiomyolipoma [7].

Myelolipomas are small, asymptomatic and non-functional in nature. The benign nature of these lesions has been established. Nevertheless, it remains unclear how this tumour actually develops.

We conclude that adrenal myelolipomas are rare tumours. Clinical monitoring for symptoms with routine follow-up imaging have been found to be unnecessary in patients with small, asymptomatic myelolipomas [13].

Histomorphology is adequate for diagnosis.

References

- Gierke E. Uber knochenmarksgewebe in den nebenniere. *Beitn Path Anat* 1905;7:311-25.
- Oberling C. Les formations myelolipomatouses. *Bull Cancer* 1929;18:234-46.
- <http://radiopaedia.org/articles/adrenal-myelolipoma>.
- T Hussain, S Al-Hamali. Pathophysiology and management aspects of adrenal angiomyolipomas. *Ann R Coll Surg Engl*. 2012 May;94(4):224-26.
- Meaglia JP, Schmidt JD. Natural history of an adrenal myelolipoma. *J Urol*. 1992;147:1089-90. [PubMed].
- Lawler LP, Pickhardt PJ. Giant adrenal myelolipoma presenting with spontaneous hemorrhage: CT, MR and pathology correlation. *Ir Med J*. 2001;94:231. [PubMed].
- Abdulkader M, Abercrombie J, McCulloch TA, Kaye PV. Colonic angiomyolipoma with a monotypic expression and a predominant epitheloid component. *J Clin Pathol*. 2005;58:1107-9. [PMC free article] [PubMed].
- Kahng HC, Chin NW, Opitz LM, Pahuja M, Goldberg SL. Cellular angioliopoma of the breast: Immunohistochemical study and review of the literature. *Breast J*. 2002;8:47-9. [PubMed].
- Kazakov DV, Hes O, Hora M, Sima R, Michel M. Primary intranodal cellular angioliopoma. *Int J Surg Pathol*. 2005;13:99-101. [PubMed].
- Lam KY, Lo CY. Adrenal Lipomatous tumours: A 30 years clinico-pathological experience at a single institution. *J Clin Pathol*. 2001;54:707-12. [PMC free article] [PubMed].
- Makino E, Yamada J, Tada J, Arata J, Iwatsuki K. Cutaneous angioliopoleiomyoma. *J Am Acad Dermatol*. 2006;54:167-71. [PubMed].
- Rajesh Godara. et al. Adrenal angiomyolipoma: A rare entity. *Indian J Urol*. 2007 Jul-Sep;23(3): 319-20.
- Bandar Al Harthi. et al. Adrenal myelolipoma a rare benign tumour managed laparoscopically: Report of two cases. *J Minim Access Surg*. 2009 Oct-Dec; 5(4):118-20.