Volume : 5 | Issue : 12 | December 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46

Myelolipoma of Right Adrenal Gland With Pancytopenia – A Rare Combination

General Surgery

KEYWORDS : myelolipoma, adrenal gland, pancytopenia, enucleation.

* SHIVAYAK MISHRA	MBBS MS, SURGERY RESIDENT, DEPT OF GENERAL SURGERY B J MEDICAL COLLEGE AND SASSOON GENERAL HOSPITAL, PUNE 411001 MAHARASHTRA, INDIA, * corrosponding auther
SANTOSH THORAT	MBBS MS (SURGERY) FIAGES, FMAS, ASST.PROF SURGERY, DEPT OF GENERAL SURGERY B J MEDICAL COLLEGE AND SASSOON GENERAL HOSPITAL,PUNE 411001 MAHARASHTRA, INDIA
VANDANA S DUBE	MBBS MS (SURGERY), PROFFESSOR OF SURGERY, DEPT OF GENERAL SURGERY, B J MEDICAL COLLEGE AND SASSOON GENERAL HOSPITAL, PUNE 411001 MAHARASHTRA, INDIA

ABSTRACT

Myelolipoma is a rare tumor mainly involving adrenal gland. Its worldwide incidence is less than 0.4% with male to female ratio being the same. These can be of varying sizes and small masses can be asymptomatic. These are mostly found incidentally. Adrenal myelolipomas are found to occur concurrently with other conditions with hormonal dysfunction such as cortical adenoma. We report an unusual case of myelolipoma along with pancytopenia. Surgical removal of myelolipoma caused an improvement in haematological parameters in our case.

INTRODUCTION-

Adrenal myelolipoma is a rare, endocrinologically inactive, and benign tumor with varying proportions of mature fat and hematopoietic elements[1,2]. Most lesions being small are asymptomatic and commonly discovered incidentally. Their incidence has been reported to be less than 0.4%. Very less literature is present to support any association between myelolipoma and pancytopenia. We report here a case of incidentally found adrenal myelolipoma with pancytopenia.

CASE REPORT-

A 41 year old man presented with complaints of generalised weakness, bilateral lower limbs swelling, breathlessness on exertion and chest pain in our surgery outpatient department. There was no previous history of pain abdomen/ flushing/ diarrhea. He was a chronic alcoholic for the past 20 years. Abdominal examination was unremarkable. Complete blood count revealed pancytopenia with haemoglobin of 6 gm%, total leucocyte count of 3000/Cumm and platelet count of 80,000. Contrast enhanced CT scan of the abdomen was done for the patient which showed a mass lesion of size 5×7×7 cm in right suprarenal area (Figure1). Bone marrow examination was done which showed hypercellular bone marrow with immature megakaryocytes. After doing all hormonal assays, decision for operative intervention was taken.



Figure 1: Computerized tomography: a mass lesion in right suprarenal area

Surgical excision was done. An encapsulated tumor mass of size 6×7×7 cm was found in the region of the right adrenal replacing the adrenal gland. The tumor was not adherent to any of the surrounding structures. It was separate from the right kidney, so the kidney could be preserved. Intraoperative blood loss was insignificant.

On **macroscopic** examination of the surgically removed specimen, the tumor was measured as 7×6×4 cm, externally brownish in colour (Figure 2). On cut section appears markedly congested. A cystic structure with papillary excrescenses was identified measuring 2 cm in diameter. **Microscopic** examination revealed that the tumor was composed predominately of hematopoetic cells consisting of myeloid, erythroid and megakaryocytic series with areas of mature adipose tissue (Figure 3). These findings established the diagnosis of adrenal myelolipoma. There was no evidence of malignancy.

The patient recovered well and the post-operative period was uneventful. Hematological parameters improved significantly after the surgery.

The patient was discharged on 8th post operative day. Patient was stable during follow up and there was no detoriation in haematological parameters.



Figure 2: Surgically removed tumor

Volume : 5 | Issue : 12 | December 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46

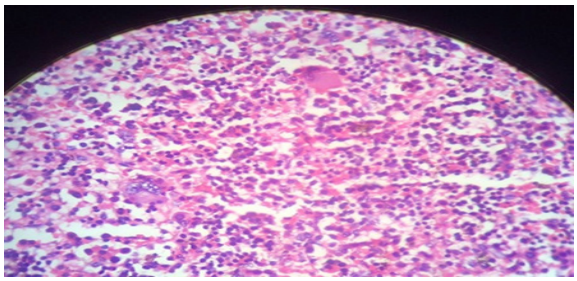


Figure 3: Photomicrograph showing intimately admixed adipose tissue and hematopoietic elements

DISCUSSION-

Myelolipoma is a rare, benign, and endocrinologically inactive neoplasm. Mostly these involve the adrenal glands with varying proportions of hematopoietic and adipose tissue. It was first described in 1905 by Gierke and the name "myelolipoma" was coined by Oberling[3,4]. In the past, these tumors were accidentally discovered at autopsy. Today, they are found much more frequently and incidentally, mainly because of the widespread use of noninvasive imaging with ultrasonography, computed tomography, and magnetic resonance imaging[5].

Myelolipomas are often less than 4 cm in diameter when discovered. However they can attain very large sizes. Most lesions are asymptomatic, small, and unilateral, but a number of bilateral tumors have been reported[6]. Adrenal myelolipomas are found to occur concurrently with other conditions with hormonal dysfunction such as cortical adenoma, ganglioneuroma, carcinoma, pheochromocytoma, Cushing's and Conn's syndrome, overproduction of dehydroepiandrosterone sulphate (DHEAS), and CAH due to 21 hydroxylase deficiency or 17 α hydroxylase deficiency[7-13]. But association with pancytopenia is a rare finding. In our case pancytopenia can be explained by nutritional deficiency caused by chronic alcohol consumption or because of metabolic derangements caused by the tumor. Although no such association has been present in literature.

Fine needle aspiration or biopsy is the gold standard for diagnosis. They have peculiar findings on histopathology. Conservative management should be opted for small, asymptomatic lesions. Surgery is often required for large, symptomatic masses[14].

In our case we found myelolipoma together with pancytopenia which is a rare entity. Surgical removal of the mass was done which also improved haematological parameters in our patient.

These kind of cases with atypical association should be treated with excision of adrenal myeloplipoma which cause improvement in haematological parameters and general condition of the patient. However, post- operative regular follow up with abstinence of alcohol consumption is a necessity.

DISCLOSURE-

No conflicts of interest were declared by the authors.

REFERENCES-

1. Wilhelmus JL, Schrodt GR, Alberhasky MT, Alcorn MO. Giant Adrenal Myelolipoma: case report and review of the literature. Arch Pathol Lab Med 1981;105:532-5.
2. Noble MJ, Montague DK, Levin HS. Myselolipoma: An Unusual Surgical Lesion of the Adrenal Gland. Cancer 1982;49:952-8.
3. *Gierke E:* Ueber Knochenmarksgewebe in der Nebenniere. Beitr Path Anat. 7:311, 1905.
4. *Oberling, C:* Les formations myélo-lipomateuses. Bull Assoc Franc Cancer 18:234, 1929.
5. Scalisi G. Editorial Comment to Adrenal myelolipoma associated with hyperandrogenemia. *International Journal of Urology*. 2012;19(11):1029–1030.
6. Cha JS, Shin YS, Kim MK, Kim HJ. Myelolipomas of both adrenal glands. *Korean Journal of Urology*. 2011;52(8):582-585.
7. Manassero F, Pomara G, Rappa F, Cuttano MG, Crisci A, Selli C. Adrenal myelolipoma associated with adenoma. International Journal of Urology. 2004;11(5):326–328.
8. Merchant SH, Herman CM, Amin MB, Ro JY, Troncoso P. Myelolipoma associated with adrenal ganglioneuroma. Archives of Pathology & Laboratory Medicine. 2002;126(6):736–737.
9. Sun X, Ayala A, Castro CY. Adrenocortical carcinoma with concomitant myelolipoma in a patient with hyperaldosteronism. Archives of Pathology & Laboratory Medicine. 2005;129(6):e144–e147.
10. Ukimura O, Inui E, Ochiai A, Kojima M, Watanabe H. Combined adrenal myelolipoma and pheochromocytoma. Journal of Urology.1995;154(4, article 1470).
11. Hisamatsu H, Sakai H, Tsuda S, Shigematsu K, Kanetake H. Combined adrenal adenoma and myelolipoma in a patient with Cushing's syndrome: case report and review of the literature. International Journal of Urology. 2004;11(6):416–418.
12. Wagnerová H, Lazúrová I, Bober J, Sokol L, Zachar M. Adrenal myelolipoma. 6 cases and a review of the literature. Neoplasma. 2004;51(4):300–305.
13. Umpierrez MB, Fackler S, Umpierrez GE, Rubin J. Adrenal myelolipoma associated with endocrine dysfunction: review of the literature. The American Journal of the Medical Sciences. 1997;314 (5):338–341.
14. Patel VG, Babalola OA, Fortson JK, Weaver WL. Adrenal myelolipoma: report of a case and review of the literature. Am Surg 2006;72:649e54.