Original Research Paper

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Histopathology

RARE CASE OF RENAL LYMPHANGIOMA IN ADULT

Dr. Leena Talukdar — Associate Professor, Department of Pathology Gauhati Medical College & Hospital, Guwahati, Assam.

Dr. Nilay Talukdar* — Post Graduate Trainee, Department of Pathology Gauhati Medical College & Hospital, Guwahati, Assam. *Corresponding Author

ABSTRACT **Introduction:** Renal Lymphangiomatosis is an extremely rare condition which is a developmental malformation. Very few cases have been reported till date. **Case Report:** A 30 year old male presented with 3 episodes of gross haematuria diagnosed by MDCT IVU and MRI KUB as a vascular lesion of right kidney. This was followed by histopathological study of the right nephrectomy specimen sent by the Department of Urology, Gauhati Medical College, Guwahati; which showed features of Right sided Renal Lymphangiomatosis with an advice to do an Immunohistochemical study by anti CD34 antibody. **Discussion:** Renal lymphangioma thought to be result of obstruction of lymphatic ducts around the kidney resulting in unilocular or multilocular cysts. Though can be seen at any age, the disease is most commonly presented in children. **Conclusion:** Lymphangioma of kidney is an exceedingly rare condition. Surgery is the mainstay of treatment and Histopathological examination is the mainstay of diagnosis.

KEYWORDS :

INTRODUCTION:

Lymphangioma of the kidney is an extremely rare condition [1]. Only few of the reported cases are known. It is a developmental malformation of the perinephric lymphatic system rather than a true neoplasm and is thought to result from failure of the lymphatic system to communicate with the venous system [2]. Some lymphangiomas are diffuse or multicentric, the condition being called as lymphangiomatosis.

CASE REPORT:

We present a case of 30 years old male with gross haematuria. The patient came to the Out Patient Department of Urology, Gauhati Medical College Hospital, Guwahati with the chief complains of 3 episodes of gross haematuria since 20 days. The patient was examined in the Department of Urology, GMCH. General and Systemic examination showed no significant abnormalities. The patient was advised to do a complete blood count, a routine urine examination and a kidney function test. His complete blood count showed a mild Microcytic Hypochromic type of Anaemia (10.5 g/dL), routine urine examination showed microscopic haematuria of 5-6 RBCs/ HPF. The parameters of kidney function test were under normal limit. He was further advised to do a MDCT IVU which revealed the possibility of a vascular lesion and this was further supported by MRI KUB study which showed features of Right Renal Lymphangiomatosis. Right sided simple nephrectomy was performed in the department of Urology, Gauhati Medical College & Hospital Guwahati and the specimen was sent to the histopathology section of the Department of Pathology, Gauhati Medical College & Hospital, Guwahati.

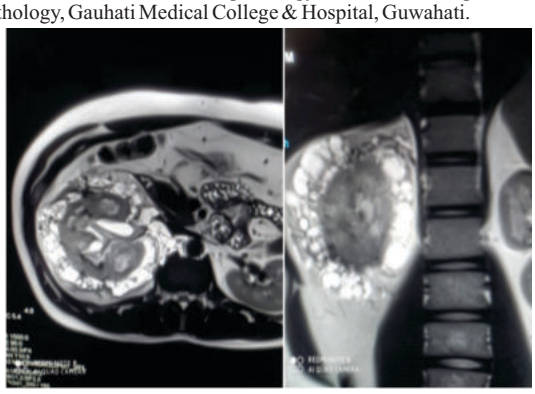


Fig: MRI KUB views of Right Renal Lymphangiomatosis

Histopathological Examination:

Gross- Received a Right sided nephrectomy specimen measuring (13 X 10 X 6.5) cm3. On cut section, a tumor mass is noted measuring (8 X 7 X 5) cm3. Tumor is solid cystic. There are multiple cystic areas. Grossly, the tumor invades medulla, cortex and capsule. Perinephric fat and Gerota's fascia appear to be free from tumor. Pelvicalyceal system cannot be delineated. Coticomedullary differentiation is lost.

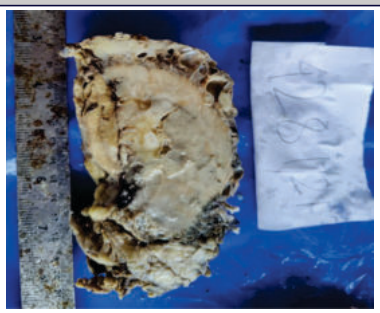


Fig: Cut Section of the Kidney showing solid-cystic nature of the lesion

Microscopy- Sections show structures of kidney comprising of glomeruli and tubules. However focal areas show irregular ill-defined confluent spaces, some of them are lined by discontinuous flattened epithelium (? Vascular).Some cystic spaces contain eosinophilic proteinacious material. These Histomorphological features suggest the possibility of Right sided Renal Lymphangiomatosis. Immunohistochemistry for CD34 was done and showed membranous positivity by endothelial cells lining the vascular spaces of the lesion.

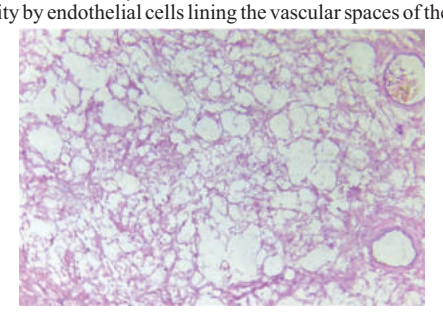


Fig: Section from the kidney showing vascular spaces of Renal Lymhangioma (H & E).

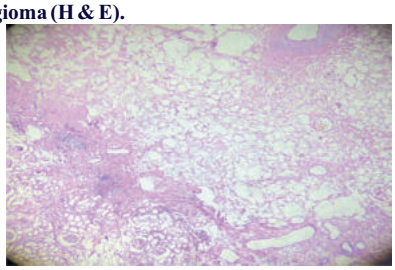


Fig: Section from the kidney showing normal renal parenchyma and vascular spaces of renal lymphangioma (H & E)

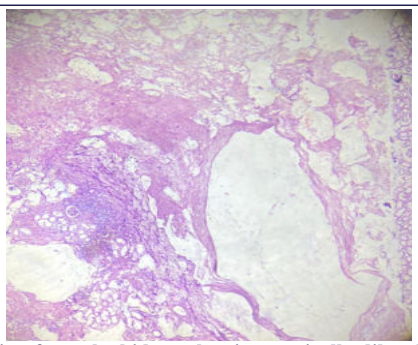


Fig: Section from the kidney showing cystically dilated vascular spaces of renal lymphangioma and few areas of normal renal parenchyma showing glomeruli and tubules (H & E)

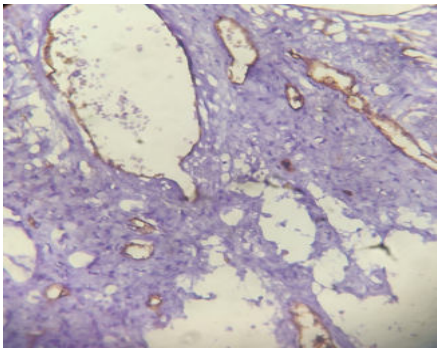
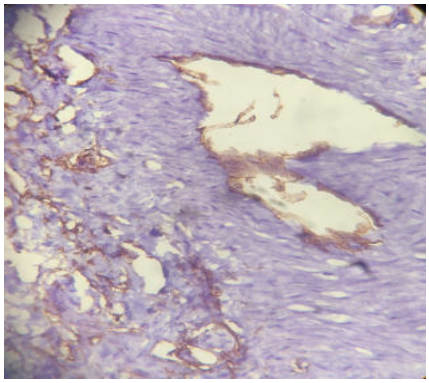


Fig: Cells of the vascular spaces showing positivity for Cd34 immunostain



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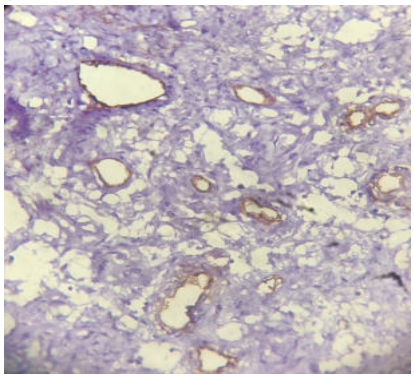

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DISCUSSION:

Lymphangiomas are benign and rare malformations of the lymphatic system. Three forms exist: Capillary, Cavernous and Cystic. Renal lymphangioma thought to be result from obstruction of lymphatic ducts through the renal pedicle resulting in dilatation of lymphatic channels around the kidney that can lead to unilocular or multilocular cysts [3]. This benign condition is reported at all ages with most occurring during childhood [4]. Clinical manifestations could be lumbar pain, haematuria, proteinuria, chyluria [5, 6] or it could be an incidental finding.

CONCLUSION:

Lymphangiomatosis is an exceedingly rare and benign condition of kidney. Preoperative diagnosis is challenging as the clinical and radiologic features are non specific. Confirmation is by histopathological examination only. Total resection of the involved kidney is the mainstay of the treatment. Prognosis is excellent.

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