EPIDERMOID CYST OF THE SPLEEN: REPORT OF A CASE

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ABSTRACT

Splenic epidermoid cyst is a rare entity and represents about 10% of the non-parasitic benign cysts of the spleen. We report a rare case of epidermoid cyst in a 45-year-old female who presented with pain and left upper abdominal mass. So far, such case has not been reported from Nepal.

Key Words: *Epidermoid cyst, spleen, late onset, mesothelial cyst.*

INTRODUCTION

Epidermoid cysts of the spleen are uncommon and represent about 10% of the non-parasitic benign cysts of the spleen.¹ The spleen can be involved in a variety of lesions ranging from cystic neoplasm and parasitic cysts to “true” and “false” cysts.² Epidermoid splenic cyst is a rare cyst of developmental origin.^{1,2} Nonparasitic cyst of the spleen are classified as primary or epithelial cysts when their inner surface has a cellular lining.³ The diagnosis depends on the surgical ablation of the cyst and histopathological examination.⁴

CASE REPORT

A 45-year-old lady presented with history of pain and left upper abdominal mass of two months duration. Pain was mild, non-radiating and was not related with food and vomiting. Her past history did not reveal any medical or surgical problem. There was no history of trauma or parasitic infestation.

General physical examination showed mild pallor. Abdominal examination revealed splenic enlargement of about 4 cm below costal margin. It was firm in consistency and non-tender. Her haemogram and coagulation profile were within normal limits. Ultrasonography suggested huge splenic cyst which was

hyperechoic. Total splenectomy was performed under general anesthesia and the spleen was sent for histopathological examination.

Grossly spleen measured 11 X 8 X 9 cm (Fig 1a). Cut section

showed a unilocular cyst filled with serous fluid. The thickness of cyst wall varied from 0.2 to 1 cm. At one pole the cyst wall with increased thickness had appearance of normal splenic tissue. Inner lining of cyst was white and coarsely trabeculated (Fig 1b).

Microscopic examination of the cyst wall showed single layer of low cuboidal cells resembling mesothelium, with underlying

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Fig. 1b

Fig. 1b : Specimen of splenic cyst, inner surface showing opaque white and trabeculated appearance.

Fig. 2a

Fig. 2a : Photomicrograph of the splenic cyst showing a single layer of cuboidal mesothelial cells residing on a fibrous stroma and splenic parenchyma (H & E; X 40).

Fig. 2b

Fig. 2b : Higher magnification of the Fig. 2a (H & E; X 400).

fibrocollagenous tissue (Fig. 2a, 2b). The compressed thinned out splenic tissue showed mild congestive change with thickened sinusoidal stroma. No squamous metaplasia was seen and stains for mucicarmine was negative.

DISCUSSION

Splenic cysts are parasitic or non-parasitic based on their aetiology and true cyst (primary) or pseudocyst (false, secondary) based on the presence or absence of lining epithelium.² Depending upon the pattern of the inner surface cell layer, the primary splenic cysts are divided into mesothelial or epidermoid subtypes.³ However both types of these cysts are included under the study of epidermoid cyst.

The epidermoid splenic cysts are rare and are usually seen in children and young adults and contribute about 10% of the non-parasitic benign cysts of the spleen.¹⁻⁹ Histogenesis of true cyst is unknown. It is believed that the epithelial lined splenic cysts are the result of invagination of surface capsular mesothelium with subsequent cystic expansion and metaplastic changes.^{3,6} These cysts are caused by an abnormal development during the seventh week of the intrauterine life.¹ Their occurrence in childhood further supports the developmental nature of these cysts.

Most splenic cysts are often asymptomatic and symptoms relate to both the size of the mass, compression of an adjacent organ and complications.^{7,13} Duvoisin B et al¹⁰ emphasize the rarity of the lesion, which can be noted on plain films, ultrasonography and computed tomography. The case under discussion was asymptomatic upto 45 years of age, which is unique about this case and was brought to attention by pain and abdominal mass and was diagnosed as splenic cyst ultrasonographically.

Tsakayannis DE et al⁴ reviewed cases till 1993 and observed that the age at the time of presentation ranged from newborn to 17 years (median 12 years). The male: female ratio was 1.0:1.1. They also observed that cysts, which were associated with an abdominal mass and/or abdominal pain, were greater than 8 cm in size, and there were no complication owing to the cysts. Ultrasonography was the most cost-effective and least invasive method of evaluation as also observed in our case. They recommend that preservation by hemisplenectomy or cystectomy is the treatment of choice to avoid the long term risk of splenectomy.

Splenectomy is recommended to eradicate symptoms produced by the cyst and to prevent potential complications like haemorrhage, infection and rupture of the cyst.^{3,7,11} In our case total splenectomy was performed after ultrasonographic report of huge splenic cyst and the diagnosis of epidermoid cyst was confirmed by histopathological examination. Although rare the possibility of an epidermoid cyst should be considered in the differential diagnosis of splenomegaly.

REFERENCES

1. Jegu P, Hamidou M, Horhant P, Girard L, Strat AL, Lancien G, Grosblos B, Leblay R. Epidermoid cyst of the spleen. 2 cases. *Ann Med Interne.* 1997; 148: 95-97.
2. Shirkhoda A, Freeman J, Armin AR, Cacciarelli AA, Morden R. Imaging features of splenic epidermoid cyst with pathologic correlation. *Abdom Imaging.* 1995; 51: 449-451.
3. Burring KF. Epithelial (true) splenic cysts. Pathogenesis of the mesothelial and so called epidermoid cyst of the spleen. *Am J Surg Pathol.* 1988; 12: 275-281.
4. Tsakayannis DE, Mitchell K, Kozakewich HP, Shamberger RC. Splenic preservation in the management of splenic epidermoid cysts in children. *J Pediatr Surg.* 1995; 30: 1468-1470.
5. Alvarez GD, da Silveria ML, da Costa EM, Pagliarin FV, Costa I. Epidermoid splenic cyst in a child. Report of a case. *Arg Gastroenterol.* 2000; 37: 69-71.
6. Ough YD, Nash HR, Wood DA. Mesothelial cyst of spleen with squamous metaplasia. *Am J Clin Pathol.* 1981; 76: 666-669.
7. Lam HB, Liu TP, Jeng KS. Huge splenic epidermoid cyst: a case report. *Chung Hua I Hsueh Tsa Chih.* 1997; 60: 113-116.
8. Makashir R, Mandal AK, Goel RG. Epidermoid cyst of the spleen - report of a case and review of literature. *Indian J Pathol Microbiol.* 1990; 33: 375-376.
9. Musy PA, Roche B, Belli D, Bugmann P, Nussle D, Le Coultre C. Splenic cysts in pediatric patients- a report on 8 cases and review of the literature. *Eur J Pediatr Surg.* 1992; 2: 137-140.
10. Duvoisin B, Golli M, Sefrioui F, Pianté M, Vasile N, Schnyder P. Epidermoid cysts of the spleen. Report of 6 cases. *J Radiol.* 1990; 71: 345-350.
11. Hulzebos CV, Leemans R, Halma C, de Vries TW. Splenic epithelial cysts and splenomegaly: diagnosis and management. *Neth J Med.* 1998; 53: 80-84.
12. Reddi VR, Reddy MK, Srinivas B, Sekhar CC, Ramesh O. Mesothelial splenic cyst - a case report. *Ann Acad Med Singapore.* 1998; 27: 880-882.
13. Sakamoto Y, Yunotani S, Edakuni G, Mori M, Iyama A, Miyazaki K. Laparoscopic splenectomy for a giant splenic epidermoid cyst: report of a case. *Surg Today.* 1999; 29: 1268-1272.

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