

Splenic Hydatid Cyst which was Detected during Coronary Angiography

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Abstract: Hydatid disease is endemic in farming areas but occurs worldwide. Echinococcosis is a parasitic disease caused by *Echinococcus granulosus*. Primary Hydatid disease of the spleen is very rare and generally asymptomatic. Owing to the high risk of a rupture, splenic hydatid cysts are usually treated surgically. The standard treatment is splenectomy. In this report, a case of an isolated splenic hydatid cyst detected during coronary angiography is reported.

Keywords: Hydatid cyst, Spleen, Coronary angiography, Fluoroscopy

INTRODUCTION

Hydatid disease, caused by the larval stage of the parasite *Echinococcus*, is a considerable health problem worldwide. *Echinococcus granulosus* accounts for the majority of the cases whilst *Echinococcus multilocularis* and *Echinococcus vogeli* are rare. Humans happen to be accidental or incidental intermediate host and, as far as the parasite is concerned, a dead end. Hydatid disease can involve any organ. The liver is the most common organ involved and, together with the lungs accounts for 90% of the cases. Other sites of involvement are muscles (5%), bones (3%), kidneys (2%), brain (1%), and spleen (1%) [1]. The clinical signs and symptoms of splenic hydatid cysts depend on their size, relationship with adjacent organs, and complications.

CASE REPORT

A 51-year-old man was admitted to our clinic with atypical chest pain, which had started approximately 1

month before admission. General physician examination revealed no abnormal findings. His 12-lead electrocardiogram and transthoracic two-dimensional echocardiography were normal. Chest radiography was normal. Exercise stress testing was positive. Selective coronary angiography revealed no significant lesions of coronary arteries. During coronary angiography, a mass of approximately 8x6 cm size, round, straight edge and calcific borders in the left upper quadrant of abdomen was seen by fluoroscopy (Fig. 1A and B). Abdominal ultrasonography revealed a mass with round calcification and internal cysts, 7.5x5.9 cm in diameter, in the spleen. Abdominal computed tomography showed a 7.7x 6.8 cm in size loculated cyst originating from the spleen (Fig. 2). We did not detect any other visceral localisation. Hemoglobin, a total leukocyte count and differentials were found to be within the normal range. The result of an indirect haemagglutination test for *Echinococcus* was positive. The patient was referred to general surgery for operation.

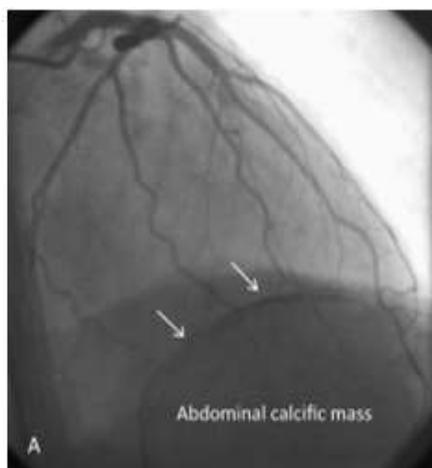


Fig. 1 A and B: Abdominal calcific mass which was detected by fluoroscopy during coronary angiography (white arrows)



Fig. 2: Abdominal computed tomography reveals cystic mass originating from the spleen (black arrow)

DISCUSSION

Splenichydatid cyst is a rare entity from among abdominal hydatid cysts, even in endemic countries. The frequency of splenichydatid disease has been reported to be 0.5-4% within abdominal hydatid disease. Splenichydatid cysts are generally asymptomatic. Diagnosis is usually established incidentally during investigation of unrelated symptoms. When the cyst reaches an advanced size, the patient presents with a painful mass in the left hypochondrium. Other initial presentations include renal arterial compression and systemic hypertension or rupture of the splenichydatid cyst to the other organs [3, 4].

The imaging characteristics of splenichydatid cysts are similar to those of hydatid cysts: calcification of the cyst wall, the presence of daughter cysts and membrane detachment. The cyst fluid is a transudate of serum that contains protein and is antigenic. The differential diagnosis for splenichydatid cysts includes other splenic cystic lesions such as epidermoid cysts, pseudocysts, splenic abscesses, hematomas and cystic neoplasms of the spleen [5, 6]. The results of routine laboratory blood work are nonspecific. Hematology may reveal varying degree of eosinophilia. Though immunodiagnostic tests lack specificity, they may be helpful in diagnosis since their sensitivity varies from 60% to 90%. Results of various serologic tests for echinococcus must be interpreted in conjunction with the patient's medical history, clinic presentation and other findings. Although serological tests are useful in order to establish the diagnosis, abdominal ultrasonography and computed tomography are necessary [7].

A splenichydatid cyst should be treated surgically due to the high risk of a rupture. The ideal procedure for the treatment is standard splenectomy [4, 7, 8]. Extreme caution must be taken during surgical treatment in order to avoid rupture of the cyst. The various preferred surgical techniques for treating splenichydatid disease include total splenectomy, partialsplenectomy, cyst enucleation and unroofing with omentoplasty. Chemotherapy and newer methods, such as puncture, aspiration, injection, and re-aspiration technique using hypertonic saline or 0.5% silver nitrate solutions before opening the cavities tends to kill the daughter cysts. The efficacy of percutaneous drainage is similar to that of standard treatment with cystectomy when reducing the size and disappearance of the cyst over a period of up to two years are considered. The advantages of percutaneous drainage include a shorter hospital stay and a lower complication rate. Albendazole is an effective adjuvant therapy in the treatment of hydatidcyst. The patients who received albendazole therapy are found to have less chances of recurrence [8].

CONCLUSION

In conclusion, we emphasize that noncardiac calcific lesions which are detected accidentally during coronary angiography, mustn't be overlooked and must be evaluated in detail. Hydatid disease should be included in the differential diagnosis of visceral calcificlesions in any tissue or organ.

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