Calcified Splenic Cyst
Report of a Case*

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Splenic cysts, in general, are infrequently encountered in medical practice. Among these, calcified cysts are extremely rare. Harmer and Chalmers,1 in a review of the literature to 1946, reported a total of 163 splenic cysts of all types. Our comprehensive review of medical publications revealed only 31 cases of calcified splenic cyst on record to date: Fowler2 reported 7 cases; Foldes,3 Gatersleben,4 Baumann and Kohnstamm,5 Segelman,6 Scotson,7 Arenas and Goni,8 Goinard,9 Schawian,10 Dellantony et al,11 Romano et al,12 Bachman,13 Zdansky,14 Nosiglia,15 Elkeles and James,16 Gallagher and Mossberger,17 Culver et al,18 Snoke,19 Neldhart,20 Duggan,21 and Jameson and Smith22 reported one each; Kierlufl23 reported four additional cases.

We are presenting what we believe to be the thirty-second reported instance of this clinical finding.

Many of the calcified splenic cysts have been discovered as a result of investigation of pressure symptoms of an expanding lesion in the left upper quadrant. Frequently, a history of parasitic infestation or of localized trauma called attention to possible splenic pathology. Exploratory laparotomy, as a rule, established the correct diagnosis. Some of the cases have been observed as incidental findings on radiologic examination and the etiologic background investigated in retrospect. Many of these, as in the case we are citing, yielded no etiologic clues.

REPORT OF CASE

The patient, P. J., a 51 year old white male was first admitted to our hospital on August 12, 1946, complaining of shortness of breath and wheezing of many years duration.

The patient was born on a farm in Illinois on September 28, 1895. He lived on this farm until June 26, 1918 when he entered the U. S. Army. He served within the continental limits of the United States, except for two days in England and five months in France, and was discharged on May 19, 1919. After discharge, he drove a truck in Wisconsin and Illinois from 1919 until 1932. He was a blacksmith for ten years in Beloit, Wis-

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cousin, a bartender for the next two years, followed by odd jobs for the ensuing two years. He never left that community.

The patient had measles, mumps, and scarlet fever in childhood. There were no known complications. In the winter of 1918 and 1919, while in France, he was hospitalized four months for "rheumatism," manifested by painful swellings of the feet, knees, shoulders, and hips, with residual stiffness in these joints. There were no definite findings referable to the heart. In 1944 he again developed some swelling and pain of both knees and the left elbow, which lasted six weeks. He was treated, symptomatically, at home and made an uneventful recovery.

Since the age of 33 (1929), the patient has been suffering from seasonal bronchial asthma.

He was studied from the allergic standpoint and the significant positive findings were an eosinophilia of 11 per cent and skin sensitivity to dog dander, cat dander, cow dander, rabbit dander, sheep wool, chicken feathers, duck feathers, goose feathers, orris root, and flax seed. He was discharged September 19, 1946, with diagnoses of (1) allergic bronchial asthma, chronic, with secondary pulmonary emphysema, and (2) chronic arthritis, type undetermined.

The patient was at home for six weeks, when he suddenly developed severe dyspnea associated with mild shock. An x-ray of the chest was taken at another hospital, and the diagnosis of a right spontaneous pneumothorax was established. He was kept in bed for ten days under supportive management, and transferred to our hospital on November 5, 1946, for further care.

On the second admission, the patient appeared well developed, poorly nourished, slightly dyspnoeic while sitting up, and chronically ill. There were non-tender, shotty cervical nodes bilaterally. The trachea deviated somewhat to the left. The chest was emphysematous, with diminished excursions bilaterally. There was increased resonance throughout the right hemithorax, particularly in its upper half. There were no adventi-

**FIGURE 1**

*Fig. 1:* Postero-anterior teleoroentgenogram of the chest.

**FIGURE 2**

*Fig. 2:* Left lateral view of lower chest and upper abdomen.
tious sounds. The blood pressure was 138/72. The heart sounds were
distant but the heart was otherwise normal. The abdomen was scaphoid
with no tenderness, masses, or scars. Rectal examination was normal.
There was moderate clubbing of the fingers. The skin was clear. Clinical
course was afebrile.

Routine laboratory studies revealed a normal blood count and dif-
ferential smear, normal urinalysis and negative serologic test for
syphilis. A chest x-ray taken on November 9, 1946 revealed bilateral
basal emphysema, moderate degree of interstitial fibrosis, and residual
20 per cent pneumothorax on the right with a small amount of fluid
at the right base. A peculiar round, ring-like, radio-opaque shadow
was noted under the left hemidiaphragm, which was first considered as
an artifact because of its almost perfect ring appearance and location
in a relatively unimportant portion of a 14 x 17 inch film of the chest.
The presence of this ring shadow on subsequent chest films led to
further investigation (Fig. 1).

Since the patient presented no symptoms of an abdominal nature
and since the calcification of the suspected lesion attested to its age
and suggested inactivity, there were no definite indications for explor-
atory laparotomy, even though clinical curiosity was a strong factor.
We then decided to attempt to establish the nature of the Roentgen
shadow and its specific location by elimination studies.

Lateral film of the lower chest and upper abdomen placed the shadow
posteriorly and confirmed its spheroidal contour (Fig. 2). A Bucky film
of the abdomen suggested splenic location (Fig. 3), but was not suf-
ficiently diagnostic. A lateral view of the barium-filled stomach (Fig.
4) and barium enema study (Fig. 5) placed the lesion outside of the
gastro-intestinal tract. Intravenous urograms separated the ring shadow
from the kidney mass (Fig. 6). Diagnostic pneumoperitoneum (Figs. 7
and 8) localized the calcified spheroidal cyst within the clearly outlined
splenic shadow. The diagnosis of asymptomatic calcified splenic cyst
was then made on the basis of the above, indirect observations.

Careful search was then made for possible etiological clues as to the
formation of the cyst. Clinical history was non-contributory. Blood
chemistry studies revealed an NPN of 30 mgm. per cent, a blood sugar
of 94 mgm. per cent, a total serum protein of 6.8 mgm. per cent with
albumin 5.1 mgm. per cent and globulin 1.7 mgm. per cent. The alkaline
phosphatase and acid phosphatase were 5.4 and 1.2 Bodansky units,
respectively. The serum cephalin-cholesterol flocculation test was neg-
ative.

Hematologic studies were normal. The blood count and differential
smear were normal. Bleeding time and coagulation time were 2 minutes,
and 4 minutes, respectively. Sternal marrow smear was normal. Clot
retraction was complete in two hours. The platelet count was 190,000
per cmm., and the reticulocyte count was 1.4 per cent. The sedimenta-
tion rate was 8 mm. per hour (Westergren). Hematocrit was 46, and the
erthrocytic fragility began hemolysis at 0.44 per cent, Na Cl, and com-
pleted hemolysis at 0.34 per cent Na Cl. (Control: beginning hemolysis at
0.44 per cent Na Cl and complete hemolysis at 0.34 per cent Na Cl.)

Repeated sputa on concentrate and plain smear were negative for
acid-fast bacilli, and a culture of a gastric aspiration was negative for
acid-fast bacilli.

The echinococcus skin and complement-fixation tests were both neg-
FIGURE 3
Fig. 3: Erect film of abdomen—Fig. 4: Lateral view with barium filled stomach—Fig. 5: Barium enema.

FIGURE 4

FIGURE 5
Fig. 6: Intravenous pyelogram.—Fig. 7: Abdomen after diagnostic pneumo-peritoneum.—Fig. 8: Postero-anterior tomogram of the chest after diagnostic pneumo-peritoneum.
ative. Thick and thin blood films failed to reveal the presence of malarial parasites.
An electrocardiogram was within normal limits.
The patient made an uneventful recovery from the spontaneous pneumothorax and the bronchial asthma was controlled. There remained a total lack of symptomatology referable to the abdomen, and the patient was discharged on February 17, 1947.

SUMMARY

A case report of an asymptomatic calcified splenic cyst is presented as an addition to the 31 cases previously recorded in the literature. The diagnosis was made by Roentgen elimination studies, initiated by the observation of an unexpected subdiaphragmatic shadow on a teleroentgenogram of the chest. No etiologic background could be established.

RESUMEN

Se presenta un informe de un caso asintomático de quiste calcificado del bazo, como adición a los 31 casos sobre los que se habla informado previamente en la literatura. Se hizo el diagnóstico mediante estudios roentgenológicos eliminativos, iniciados por la observación de una sombra subdiafragmática inesperada en el teleroentgenograma torácico. No se pudo establecer la etiología.

REFERENCES