Pericarditis As The Presenting Manifestation In Subdiaphragmatic Abscess

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PERICARDITIS AS THE PRESENTING MANIFESTATION IN SUBDIAPHRAGMATIC ABSCESS

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Pericarditis is a relatively uncommon thoracic complication of subdiaphragmatic abscess. The following case is considered worthy of reporting inasmuch as the findings of pericarditis preceded other diagnostic signs of the subdiaphragmatic abscess.

CASE REPORT

A 35 year old white female entered the Henry Ford Hospital on March 22, 1959, with a history of severe diarrhea, intermittent fever and weight loss of 50 pounds in an eight month period. Anorexia, abdominal cramping and swelling, redness and tenderness of the knees and wrists had also been present. The patient had received cortisone therapy and blood transfusions prior to her transfer here from a Lansing hospital.

On physical examination, she was a poorly nourished, chronically ill, white female appearing toxic and wasted. The temperature was 103 degrees, blood pressure 90/60; examination of the abdomen revealed hyperactive bowel sounds and the stool guiac on rectal examination was 3+.

Extensive laboratory studies were performed including repeated stool examinations for ova, parasites, agglutination studies for typhoid, paratyphoid and shigella, all of which were negative. Sigmoidoscopy and colon x-rays revealed changes characteristic of chronic ulcerative colitis.

Following a period of medical management which included Barron tube feedings, asulfidine and various anti-diarrhea agents, the patient gained some 20 pounds, but continued to have diarrhea up to 6 to 10 stools daily and manifested continuing daily temperatures up to 102 degrees. On June 11, a total colectomy and ileostomy was performed; at operation, a small perforation of the descending colon with a walled-off abscess was found. Post-operatively, the patient was carried on a program which included penicillin, streptomycin and chloromycetin. She developed an acute hepatitis which was thought to be of the homologous serum type inasmuch as she had received transfusions 2 to 3 months prior to the onset of her jaundice. On June 25, the 14th post-operative day, at a time when the jaundice was clearing, a loud, well localized, to and fro friction rub was heard in the third interspace at the left sternal border. The patient's condition, otherwise seemed unchanged. A temperature of 100.8 degrees was present, but this was in the range which she had displayed during her post-operative period. Laboratory studies revealed a blood urea nitrogen of 58 mgm., serum creatine of 2.5 mgm. The blood urea nitrogen had fallen from a previous level of 78 mgm. per cent on June 22, and continued a steady decline over the ensuing 2 week period. Electrocardiographic studies revealed ST segment elevations in Leads 1, 2, AVL, V3-4 and 5. On July 8, 14 days following the onset of the friction rub, dullness and decreased breath sounds developed at the right lung base posteriorly and on fluoroscopic examination, a small right pleural

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effusion and decreased right diaphragmatic movement were noted. On July 9, 800 cc.
of purulent material was drained from the right subphrenic space through a sub-costal
abdominal incision. At the time of surgery, a small perforation was inadvertently
made in the small bowel and this was promptly repaired. On July 14, a diagnosis
of thromboplebitis was made and the patient was placed on anti-coagulant therapy.
She appeared to be improving post-operatively but expired suddenly and unexpectedly
on July 26, 1959. At autopsy, no anatomical cause was disclosed for her sudden
death which was concluded to have been due to a probable sudden cardiac arrhythmia
or arrest. Final anatomical diagnosis included: chronic ulcerative colitis, idiopathic;
post-operative total colectomy and ileostomy; gangrene of the small intestine. Microscopic
evidence of a subsiding pericarditis was also evident.

DISCUSSION

A review of 90 cases of subdiaphragmatic abscess at the Henry Ford Hospital
from 1955 to 1959, disclosed no other instance of complicating pericarditis. Harley
found no pericarditis in 182 cases of subdiaphragmatic abscess. However, in a
later series of 54 patients, the same author reported 4 patients with pericarditis
secondary to suppurative pulmonary complications of subdiaphragmatic abscess. A
review of 134 cases of subdiaphragmatic abscess at the Mayo Clinic revealed comp-
lications, mainly thoracic, in 77% but, pericarditis was not numbered among these.

Ochsner and Debakey found a 5% incidence of pericarditis in 1,380 cases
of subdiaphragmatic abscess. In their series, other thoracic complications included
perforation of the diaphragm (27.7%), empyema (17.8%) and bronchopleural
fistula (10.5%). It should be noted that pleural effusion may be an early sign
of subdiaphragmatic abscess and that recurrent pericardial effusion as well as
actual rupture into the pericordium by the subphrenic abscess may occur as com-
plications of the latter disease.

Other authors have confirmed a 2-5% incidence of pericarditis as a complica-
tion in subdiaphragmatic abscess.

Two comments with reference to our case would seem to be pertinent. First,
the possibility of a uremic etiology for the pericarditis might be suggested by the
moderate azotemia which was initially present. The likelihood of this appeared to
be minimal both because of the relatively low level of nitrogen retention and the
fact that the latter disappeared while the pericarditis persisted and, in fact, seemed
to increase in degree. Secondly, it may be speculated that the antibiotics, which
our patient was receiving, may well have played a role in masking or delaying the
appearance of the more classic signs of the underlying disease.

SUMMARY

A review of 90 cases of subdiaphragmatic abscess at the Henry Ford Hospital,
as well as a general survey of the literature, suggests that pericarditis is an uncommon
complication. This report deals with a case which was unique in that the findings
of pericarditis preceded by some two weeks the diagnostic signs of a subdiaphragmatic
abscess. It is our wish to call attention to the fact that a pericardial friction rub may be the presenting sign of an underlying subdiaphragmatic abscess.

**BIBLIOGRAPHY**