BRIEF COMMUNICATIONS

A RARE CASE OF HYDATID CYST PERCEIVED AS FALSE ANEURYSM OF THORACIC AORTA

T. Zakhariyev, MD, M. Stankev, MD, B. Baev, MD, R. Iliev, MD, and A. Tschirkov, MD, Sofia, Bulgaria

Echinococcosis caused by the larval stage of *Echinococcus granulosus* has its highest prevalence in countries where sheep and cattle raising is carried out with the help of dogs, particularly in the Middle East, Australia, New Zealand, East Africa, South Africa, Central Europe, and Eastern Europe.¹ The gravid segment of an adult *E. granulosus* matures to release eggs, whose embryos escape, penetrate the intestinal mucosa, and enter the portal circulation. Most are filtered out by the lung or liver, but some escape into the general circulation to involve brain, kidneys, bones, and other tissues. Only rarely are developed hydatid cysts found in the aortic wall, with only two cases previously described in the literature.^{2,3}

We report a rare case of isolated hydatid cyst located in the wall of the descending thoracic aorta. A 44-year-old man was admitted to our hospital with reported continuous pain in the left subcostal arch. A long-time history of arterial hypertension was noted. Echocardiography revealed a chronic dissection of the descending aorta, confirmed by contrast angiography (Fig. 1). Results of laboratory examinations were within normal ranges. The general condition of the patient did not deviate significantly from normal status, with the exception of data suggestive of aneurysmal dilation of the aorta and degeneration of thoracic vertebrae 9 and 10 (Fig. 2) causing the severe pain symptoms.

The patient underwent left thoracotomy through the fifth intercostal space. Separate intubation of both lungs with a Carlens tracheal tube⁶ was established to exclude the left lung from ventilation when needed. An aneurysmal dilation of descending aorta, 15 cm in diameter and beginning 5 cm distal from left subclavian artery and extending down to the diaphragmatic level, was seen. A heparinized aorto-aortic shunt was used to avoid bypass the aneurysm. The aneurysmic formation of the aorta was firmly adherent to the left lung, with marked atelectasis of the upper portion. The aorta was crossclamped immediately below the origin of left subclavian artery and also above the diaphragm. The left lung was excluded from mechanical ventilation. The aneurysmic formation was then opened longitudinally. We were surprised to find a mass consisting of numerous scolices and thrombotic

detritus. After this mass was removed, the huge false aneurysm showed two communications to the aortic lumen, each 2 cm in diameter. The false aneurysm was resected, with removal of the free bone sequesters from the vertebrae. The residual space was sterilized with a solution of Poly (1-Vinyl-2 pyrrolidone)-Jod Komplex (Polydon-Jod), Glycerol, Non-Oxinol 9, Kalium Iodati; Natriummonohydrogenphosphat,* to prevent recurrent hydatid cyst formation. A gelatin-coated Dacron polyester fabric prosthesis, 20 cm in diameter and 12 cm long, was interposed. After an uneventful postoperative period of 20 days and treatment with mebendazole (Vermox) at 50 mg/kg body weight, the patient was discharged from the hospital without any complaints. Results of the serologic tests used to screen for residual hydatid disease were negative. He was advised to continue taking mebendazole for 1 year. Ten months after operation, the patient remains free of symptoms.

This rare case of hydatid cyst in the aorta demonstrates how variable in location and clinical symptoms this infestation can be, making careful examination of each case necessary. Preoperative serologic tests are mandatory when patients are from known endemic areas. The release of numerous scolices after rupture of the hydatid cyst leads to disseminated infection, and great care should be taken during the surgical procedure in the case of such

Fig. 1. Contrast angiogram shows apparent chronic dissection of descending aorta. *Black arrow* indicates right margin of false aneurysm of thoracic aorta; *white arrow* indicates lumen of false aneurysm of thoracic aorta.

From University Hospital St. Ekaterina, Sofia, Bulgaria.

Received for publication March 12, 1996; accepted for publication March 18, 1996.

J Thorac Cardiovasc Surg 1997;113:792-3

Copyright © 1997 by Mosby-Year Book, Inc.

0022-5223/97 \$5.00 + 0 12/54/73534

*Betasodona; Mundipharma GmbH, Limburg (Lahn), Germany.

Fig. 2. Dilation of aorta and degeneration of thoracic vertebrae 9 and 10 revealed on computed axial tomography. Arrow indicates free bone sequesters of vertebrae and its deteriorated image.

patients with false aneurysm located in the thoracic aorta and associated with dense adhesions and atelectasis of the left lung. A thorough history should be taken, with special attention to previous contact with animals. Serologic investigations should include not only tests for syphilis and acquired immunodeficiency syndrome but reaction to passive hemagglutination, immunofluorescence assay, and enzyme-linked immunosorbent assay, tests specific for echinococcosis.

The absence of eosinophilia and other clinical manifestations of parasitic infection in our patient misled us to preclude the presence of hydatid cyst. Fortunately, our patient did not show any symptoms of recurrent or residual hydatid disease at 14-month follow-up.

REFERENCES

1. Burkhardt F, editor. *Mikrobiologische diagnostik*. Stuttgart, Germany: Thieme, 1992:547-8.
2. Hendaoui L, Siala M, Fourati A, Thameur MH, Hamza R. Case report: hydatid cyst of the aorta. *Clin Radiol* 1991;43: 423-5.
3. Levicharov P, Drenovski V, Vassilev I, Markov Y. False aneurysm of the thoracic aorta caused by a hydatid cyst: a case report. Balas P, editor. *Progress in angiology*, Torino, Italy: Edizione Minerva Medica, 1985:381-3.

BENEFICIAL EFFECT OF SYNTHETIC HUMAN ATRIAL NATRIURETIC POLYPEPTIDE ON RENAL FUNCTION IN A PATIENT WITH GIANT ATRIA

Kazunobu Nishimura, MD, PhD, Katsuhiko Matsuda, MD, PhD, Satoshi Konno, MD, Akihiro Sugimoto, MD, Takaaki Koshiji, MD, Tadashi Ikeda, MD, Shinichi Nomoto, MD, PhD, and Toshihiko Ban, MD, PhD, *Kyoto, Japan*

The atrium has specific granules that contain atrial natriuretic polypeptides (ANP), which are secreted from the heart and circulate throughout the body as a hormone. The main pharmacologic properties of ANP are natriuresis, diuresis, vasorelaxation, and inhibition of aldosterone.¹ Synthetic ANP is currently available and provides beneficial effects in patients with heart failure. In this

paper, the case of a patient with giant atria lacking ANP is described. The effect of synthetic ANP infusion is reported.

Case report. A 55-year-old woman was transferred to our department because of orthopnea and hepatocardiomegaly caused by mitral stenosis and tricuspid regurgitation. She has twice previously undergone mitral operation (closed mitral commissurotomy at age 21 years and open mitral commissurotomy at age 23 years), and congestive heart failure had developed because of recurrent mitral stenosis combined with severe tricuspid regurgitation that caused marked enlargement of both the left and right atria. The left atrium measured 73 mm according to the echocardiogram. The plasma concentration of ANP was less than the detectable value (<5.0 pg/ml; normal range, 8 to 32) whereas that of aldosterone was extraordinarily high (1731 pg/ml; normal range, 57 to 161). Renal function was within normal limits with a 0.9 ml/dl creatinine level.

We first used femorofemoral cardiopulmonary bypass (CPB) and approached the heart through a right thora-

From the Department of Cardiovascular Surgery, Kyoto University Faculty of Medicine, Kyoto, Japan.

Received for publication July 26, 1996; accepted for publication Sept. 16, 1996.

Address for reprints: Kazunobu Nishimura, MD, PhD, Department of Cardiovascular Surgery, Kyoto University Faculty of Medicine, Kyoto, 606, Japan.

J Thorac Cardiovasc Surg 1997;113:793-5

Copyright © 1997 by Mosby-Year Book, Inc.

0022-5223/97 \$5.00 + 0 12/54/78034