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Heart Congress 2020: Cardiac Hydatid Cysts ... A Surgical Challenge - Damascus University, Syria

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Introduction:
In the time of pandemic, infectious diseases are the latest trend. Hydatid disease is one of those infectious diseases, which is caused by tapeworms. It is spread by food eaten, water, or by close contact with infected animals. The disease is still present in different parts of the world and currently affects about one million people. According to the literature, the economic cost of the disease is estimated to be around three billion US dollars a year. When hydatid disease is in humans, cysts are in the liver (in 75% of cases), the lungs (in 5–15% of cases) and other organs such as the spleen, brain, heart, and kidneys (in 10–20% of cases).
Cardiac hydatid cysts are really rare. It is not a straightforward disease that can be diagnosed like any other. The course of symptoms is vague. It might even be without any symptoms at all, while in other patients it can be fatal. Symptoms can vary from chest pain to a cough. Several cases can include small cysts all over the heart, or one large cyst in one of the heart cavities. There is no room for routine cases in such operations.
Surgical excision is done under cardiopulmonary bypass in almost all cases. However, there have been some experience with excision on a beating heart. The main fear is reinfestation. Albendazole is one important aspect of the follow-up protocol. Preserving the heart valve functions can be a real surgical challenge in some cases.
Syria is still one of those countries where hydatid disease is still present. We see many cases that are useful to enrich the literature, while there are not many similar studies in the developed countries. We are submitting the manuscript not only to talk about those rare cases, but also to improve surgical care of cardiac surgery patients in both the developed and developing countries.

Review Method: From January 1993 through December 2003, 7 patients with cardiac hydatid disease underwent surgical treatment in our institution. The first 3 cases and the 5th have previously been reported.2,5 The clinical data on the patients are summarized in Table I. Four patients were male and 3 were female; their ages ranged from 6 to 38 years (mean, 19.8 years). Two of these patients had undergone previous operations for cardiac (Patient 1) and pericardial (Patient 4) hydatid cysts 10 and 2 years before, respectively; and a 3rd patient (Patient 2) had been operated on twice for hepatic and pulmonary cysts, 12 and 8 years before, respectively. The signs and symptoms at the time of presentation were nonspecific. The diagnosis of cardiac hydatid cyst was established during thoracotomy for a misdiagnosed paracardiac pulmonary cyst in Patient 2. In the other 6 cases, cardiac hydatid disease was diagnosed by echocardiography, which had been requested during investigations for other causes. In 1 patient with pericardial rupture of a hydatid cyst (Patient 3), the clinical picture at presentation closely mimicked the signs and symptoms of acute abdomen, which subsequently led to laparotomy. The patient was then referred to our department with symptoms of acute cardiac tamponade. Acute stroke was the presenting symptom in a 16-year-old patient

Objectives: Cardiac echinococcosis is a rare but potentially very serious complication of hydatid disease. It is a diagnostic and therapeutic challenge due to the variability of signs and symptoms at presentation and to its numerous, often unpredictable, preoperative complications. Our clinical experiences with 7 cases of cardiac echinococcosis are reported, and the diagnostic and therapeutic considerations for the management of patients are discussed, together with a review of the literature.

Results: Hydatid cyst is a human parasitic disease caused by the larval stage of the cestode tapeworm Echinococcus granulosus, which infests the gut of dogs—its definitive hosts. Human beings may serve as incidental hosts by the ingestion of ova in vegetables or water contaminated with dog feces. Hydatid disease is endemic in cattle-raising areas of the world, notably in the Mediterranean countries, the Middle East, South America, Australia, and New Zealand.1,2 The incidence of hydatidosis in the Turkish population has been reported as 1:20,000. Cardiac hydatic disease was first mentioned by Williams in 1836. In 1846, Griesinger reported 15 autopsy cases. The 1st successful surgical intervention was performed by Long in 1932. By 1964, only 42 successfully treated cases had been reported in the literature. In 1962, Arturico and colleagues reported the 1st successful operation for cardiac echinococcosis with cardiopulmonary bypass.1,2 Because there is no specific clinical picture, the diagnosis of cardiac hydatid disease usually arises from suspicion. When echinococcosis is diagnosed, the treatment of choice for even asymptomatic cases is surgical ablation, due to the risk of cystic rupture.1–4 We present herein a retrospective analysis of the diagnostic and therapeutic considerations in 7 cases of cardiac hydatid cysts, with a review of the literature.

Conclusions: IGD presents some characteristics that are not extensive to online GD. These specificities have potentialclinical implications and they need to be further studied

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