

Cardiac metastases of gallbladder carcinoma

Tomoko Inoue, Katsuya Shiraki, Hiroyuki Fuke, Yutaka Yamanaka, Kazumi Miyashita, Keiichi Ito, Masahiro Suzuki, Kazushi Sugimoto, Kazumoto Murata, Takeshi Nakano

Tomoko Inoue, Katsuya Shiraki, Hiroyuki Fuke, Yutaka Yamanaka, Kazumi Miyashita, Keiichi Ito, Masahiro Suzuki, Kazushi Sugimoto, Kazumoto Murata, Takeshi Nakano, First Department of Internal Medicine, Mie University School of Medicine, Japan

Correspondence to: Katsuya Shiraki, MD., PhD. First Department of Internal Medicine, Mie University School of Medicine, 2-174 Edobashi, Tsu, Mie, 514-8507 Japan. katsuyas@clin.medic.mie-u.ac.jp
Telephone: +81-59-231-5015

Received: 2004-08-14 Accepted: 2004-09-10

Abstract

This report describes the case of a 68-year-old woman diagnosed with advanced gallbladder cancer, whose autopsy revealed multiple metastases, including cardiac metastases.

© 2005 The WJG Press and Elsevier Inc. All rights reserved.

Key words: Gallbladder cancer; Metastasis; Metastatic cardiac tumor

Inoue T, Shiraki K, Fuke H, Yamanaka Y, Miyashita K, Ito K, Suzuki M, Sugimoto K, Murata K, Nakano T. Cardiac metastases of gallbladder carcinoma. *World J Gastroenterol* 2005; 11(13): 2048-2049

<http://www.wjgnet.com/1007-9327/11/2048.asp>

INTRODUCTION

Primary carcinoma of the gallbladder is the most common malignant tumor of the biliary tract although its overall incidence is low. Its prognosis is generally poor since it is often diagnosed at an advanced stage due to its non-specific symptoms. The liver is the most commonly invaded organ by direct extension or metastasis, followed by regional lymph nodes. Extra-abdominal metastases could occur, but are rare^[1]. This report describes the case of a 68-year-old woman with advanced gallbladder cancer, whose autopsy revealed multiple metastases, including her heart.

CASE REPORT

A 68-year-old female was admitted to our hospital because of hematoemesis, high grade fever and right upper quadrant pain in November 2000. On admission, an elastic hard mass with tenderness was palpable in the right upper quadrant. An abdominal ultrasonography and computed tomography scan revealed a gallbladder tumor of 7 cm in diameter,

which directly invaded the liver. Its biopsy revealed a poorly differentiated adenocarcinoma. Her esophagogastro-oduodenoscopy (EGDS) revealed circumferential ulcerative lesions of the second portion of the duodenum, which appeared to be a direct invasion by the gallbladder carcinoma. Ten days later, as anemia progressed, an EGD was repeated and showed new, multiple elevated lesions in the stomach. Their biopsies also showed poorly differentiated adenocarcinoma. The patient was treated by a supportive care and she died 1 mo later.

The autopsy revealed a poorly differentiated adenocarcinoma of the gallbladder measuring 20 cm in diameter, which directly invaded the liver, pancreas, and duodenum. Multiple metastatic nodular lesions were observed in her kidneys, adrenal glands, lungs, bones and heart. Surprisingly, multiple tumors were observed in both the pericardium and the myocardium with multiple coronary arterial tumor embolism. All nodular lesions were confirmed to be poorly differentiated adenocarcinomas (Figure 1).

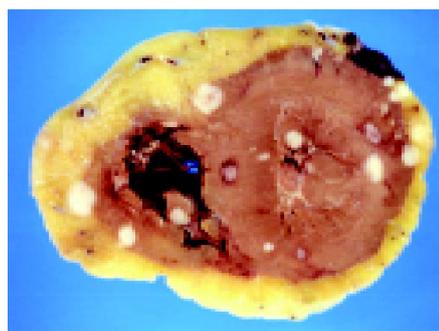


Figure 1 Autopsy examination of the heart showed multiple tumors located in both the pericardium and myocardium. All nodular lesions were confirmed to be poorly differentiated adenocarcinomas.

DISCUSSION

Metastases from gallbladder carcinoma commonly affect the liver and the paraaortic lymph nodes. Clinical presentation of gallbladder carcinoma with distant metastasis is rare.^[1-3] Metastatic neoplasms of the heart are not rare, but gallbladder carcinoma is a rare malignant tumor as a primary site. In 525 autopsied cases who represented metastatic cardiac tumors, there was only one case whose primary site was gallbladder carcinoma^[4]. Another report noted that five patients in 122 cases of cardiac metastasis had a primary gallbladder carcinoma^[5]. Only four reported cases of cardiac metastasis of the gallbladder carcinoma were found in the Japanese literature.^[4-6] Metastases in the myocardium and

endocardium were found most frequently to spread via the hematogenous route associated with tumor embolism in the coronary arteries. However, gallbladder carcinoma usually spread to the heart via retrograde lymphatic flow through the broncho-mediastinal lymphatic flow or extends directly to pericardium^[4]. Only one case with cardiac metastasis via a hematogenous route during follow-up after resection of the primary tumor was reported, but its pathology was squamous cell carcinoma^[6]. In our patient, the cardiac metastasis may have occurred via both hematogeneous and lymphatic routes, as autopsy showed both coronary arterial tumor embolism and pericardial metastases. Though the hematogeneous route of cardiac metastasis of gallbladder carcinoma is rare, it may be an important aspect of metastasis, which should be kept in mind during follow-up.

REFERENCES

- 1 **Koo J**, Wong J, Cheng FC, Ong GB. Carcinoma of the gallbladder. *Br J Surg* 1981; **68**: 161-165
- 2 **Fahim RB**, McDonand JR, Richards JC, Ferris DO. Carcinoma of the gallbladder: a study of its modes of spread. *Ann Surg* 1962; **156**: 114-124
- 3 **Chao TC**, Greager JA. Primary carcinoma of the gallbladder. *J Surg Oncol* 1991; **46**: 215-221
- 4 **Hanfling SM**. Metastatic cancer to the heart. Review of the literature and report of 127 cases. *Circulation* 1960; **22**: 474-483
- 5 **Berge T**, Sievers J. Myocardial metastases. A pathological and electrocardiographic study. *Br Heart J* 1968; **30**: 383-390
- 6 **Suganuma M**, Marugami Y, Sakurai Y, Ochiai M, Hasegawa S, Imazu H, Matsubara T, Funabiki T, Kuroda M. Cardiac metastasis from squamous cell carcinoma of gallbladder. *J Gastroenterol* 1997; **32**: 852-856

Science Editor Guo SY Language Editor Elsevier HK