Supradiaphragmatic Heterotopic Liver Presenting as a Pleural Mass: A Case Report

Jungsuk An, M.D., Joungho Han, M.D., Kyung Soo Lee, M.D., Yong Soo Choi, M.D.

Department of Pathology, Gachon University Gil Hospital, Incheon, Departments of Pathology, Radiology, Thoracic Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

Introduction

Abnormally located liver tissue has been described in the vicinity of the liver proper, near anatomical structures such as the gallbladder, the umbilical fossa, the adrenal gland, the pancreas, and the spleen1,2. Supradiaphragmatic ectopic liver is a rare finding, which has been reported in the intrathoracic cavity and pericardium1-14. In the majority of supradiaphragmatic ectopic liver cases, there was an accompanying transdiaphragmatic pedicle of the main liver body into the abdominal cavity4-6,9-11. In other cases supradiaphragmatic ectopic liver was completely separated from the abdominal cavity without a connection between the thorax and the abdomen, and diaphragmatic anomalies1,2,7. We describe one case of intrathoracic ectopic liver in a patient with a previous history of lower chest wall trauma, and a brief review of the English-language medical literature on this topic.

Key Words: Liver; Thorax; Diaphragm

Case Report

A 48-year-old woman was referred to our center due to a right supradiaphragmatic, pleural mass. Approximately 9 years ago, the patient had an injury on the right lower chest wall by car accident, and underwent closed thoracostomy. After the treatment in duration of about one week, the patient had no sequent problem. One month ago, the patient visited a local clinic due to cough and dyspnea. A computed tomography (CT) scan performed, which showed an oval well-enhancing mass in the mediastinal pleural side at the right lower lung zone, abutting the inferior portion of the right major fissure (Figure 1). On the clinical impression of benign fibrous tumor of the pleura or peripheral lung carcinoid tumor, the patient underwent a video-assisted thoracoscopic surgery. The operative field showed a 2 cm-sized oval mass based on the right hemidiaphragm close to the mediastinum, but the mass was not attached...
Figure 1. CT shows an oval well-enhancing mass in mediastinal pleural side at the right lower lung zone (arrows).

Figure 2. (A) The operative field shows a 2 cm-sized oval mass based on the right hemidiaphragm close to the mediastinum, but the mass is not attached to the lung and liver, (B) The mass have a well defined fibrous capsule (H&E stain, ×1), (C) Microscopically, the mass shows normal liver tissue consisting of polygonal hepatocytes without significant pathologic abnormality (H&E stain, ×40).

to the lung and liver (Figure 2A). Neither otherwise abnormal structure such as pedicle nor defect of the surrounding organs including the diaphragm and lung was identified. The mass was separated with easy by excision using electrocautery. The cut surface of the mass was homogenously solid and brown in color with well defined fibrous capsule (Figure 2B). Microscopically, the mass showed normal liver tissue consisting of polygonal hepatocytes without significant pathologic abnormality (Figure 2C).

Discussion

Ectopic liver have been classified into four types by Collan et al.\textsuperscript{15}. These consist of 1) an accessory lobe of the liver of considerable size and with a connecting