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Citation	日本医学放射線学会雑誌. 1984, 44(8), p. 1033-1037
Version Type	VoR
URL	https://hdl.handle.net/11094/18641
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Accessory Hepatic Lobe Simulating a Left Hemidiaphragmatic Tumor: A Case Report

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Research Code No. : 514.9

Key Words : Accessory lobe of the liver, Diaphragm, Hepatobiliary scintigraphy

左横隔膜領域に腫瘤を呈した肝副葉の１例

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（昭和58年11月１日受付）

左横隔膜領域に腫瘤を呈し，手術により確認された稀な肝副葉の１例を報告する．術後，放射線学的な考察を行ない，左側横隔膜領域に存在する本症の診断には，臓器特異性を有する肝・胆道シンチが有用であると考えられた．

Introduction

Accessory lobes of the liver are relatively uncommon. They are usually of little clinical significance[1], and are found incidentally at surgery or autopsy. Such patients only rarely complain of symptoms[2)~4)]. Occasionally, accessory lobes of the liver may present diagnostic problems, but there have been relatively few reports of this anomaly in the radiological literature[5)~10)].

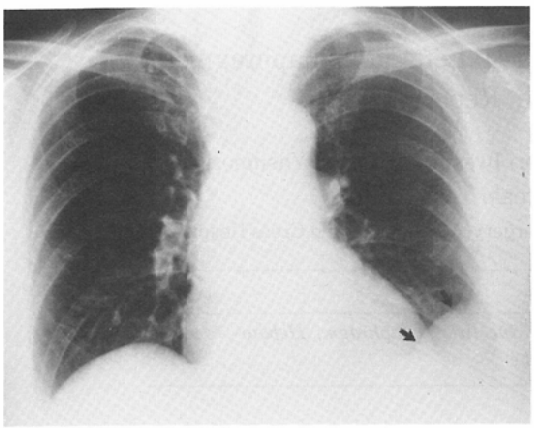
The following case is of clinical interest because of its mimicking a diaphragmatic tumor. After surgery, the radiological diagnosis of this case was reassessed.

Case Report

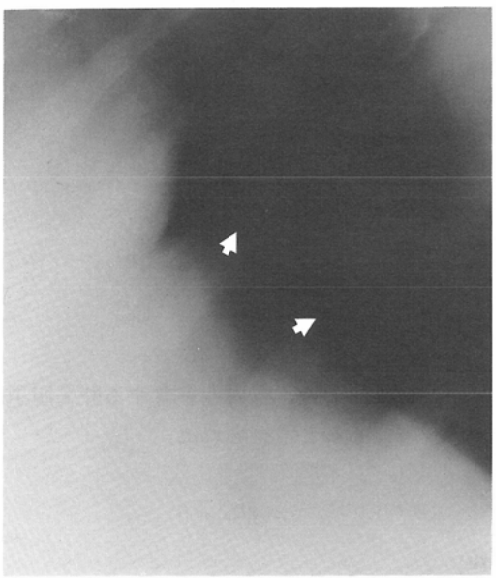
A 72-year-old woman with a 20-year history of neuralgia complained of slight discomfort in her chest two months prior to admission. Routine chest radiography revealed an abnormal density at the left base.

On admission she was asymptomatic, and her physical examination revealed only moderate kyphoscoliosis. Laboratory studies, including A-fetoprotein and carcinoembryonic antigen (CEA) were within normal limits.

Radiographs including lateral tomographs of the chest are shown in Fig. 1. Despite numerous preoperative radiological examinations (Fig. 2—4), no qualitative diagnosis was made. Material from a fine



(A)



(B)

Fig. 1 (A) Extrapleural sign in the left lung. (B) Lateral tomogram. The mass bulging into the left hemithorax (arrows), and elevating the left diaphragm.

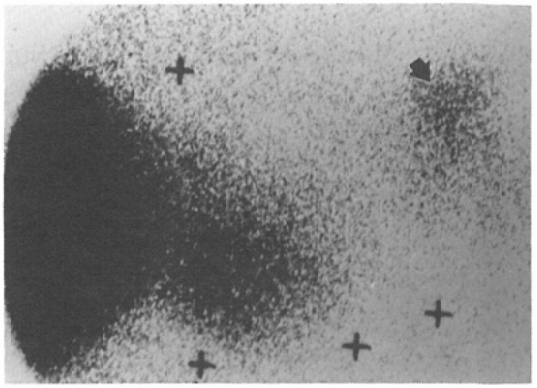


Fig. 2. Liver scintigram (anterior view). Uptake area to the left of the liver (arrow). Preoperatively, this uptake was regarded as that of the spleen.

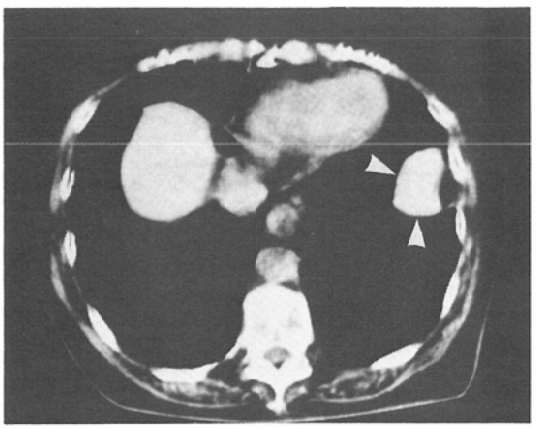


Fig. 3 CT scan. The mass bulging into the left hemithorax (arrowheads).

needle aspiration biopsy of the apparent tumor yielded a diagnosis of Class IV, but after surgery, it was determined to be Class I—normal liver cells as shown in Fig.5.

At surgery the apparent tumor in the left hemidiaphragmatic region was found to be connected with the left lobe of the liver by a cord of hepatic tissue. A wedge resection of this apparent mass proved histologically to be normal liver tissue (Fig. 6).

After surgery, to confirm the presence of an accessory lobe of the liver radiologically, hepatobiliary scintigraphy (Fig. 7) and computed tomography (CT) using left anterior oblique scanning (Fig. 8) were performed.

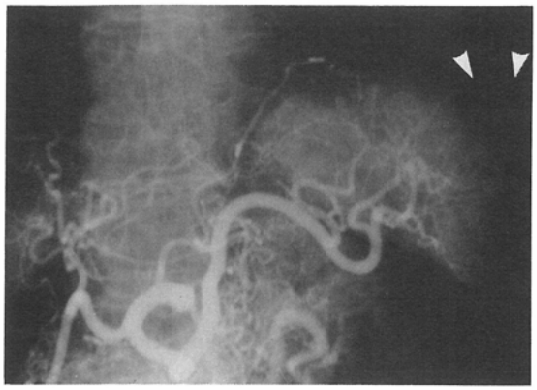


Fig. 4 Celiac angiography. No feeding arteries supply the tumor (arrowheads).

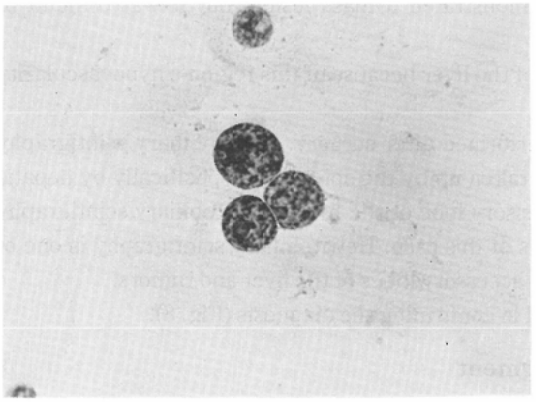


Fig. 5 Fine needle aspiration biopsy of the tumor. Normal liver cells were identified retrospectively by cytology after surgery (×1500).

Fig. 6 The mass obtained by wedge resection consisted of normal hepatic tissue (×120).

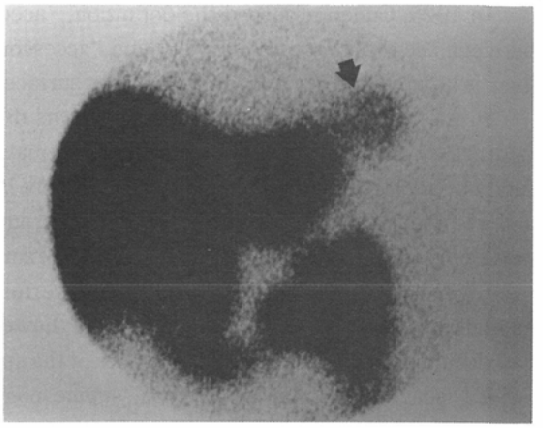


Fig. 7 Hepatobiliary scintigraphy (^{99m}Tc-Para-butyl-iminodiacetic acid). Uptake of the accessory lobe of the liver (arrow) corresponded to that of liver scintigraphy (Fig. 2).

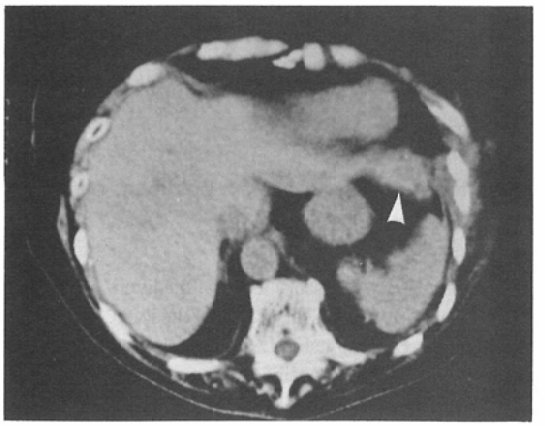


Fig. 8 CT. Left anterior oblique scan. The accessory lobe of the liver (arrowhead) extended to the left from the lateral segment of the left lobe of the liver.

Discussion

Accessory lobe of the liver is an uncommon anomaly. Our review of the literature indicates that about 100 cases have been reported.

In 1925, Cullen proposed the definition, "accessory lobes of the liver[1]", but it is difficult to distinguish between the term "accessory liver" and "accessory lobes of the liver". The cause of anomalous lobes of the liver is unknown. They may arise from any surface of the liver.

In this case, the differential diagnosis was difficult. In retrospect, the history, physical and laboratory findings might have provided important information. Some reports indicate that pneumoperitoneum is the fundamental procedure of choice to differentiate between a lesion of the diaphragm, an intrathoracic tumor, and a lesion of the liver[6)~9)]. However, the differentiation of a tumor from an accessory lobe of the liver can be made only by macroscopic and/or microscopic examinations.

Liver scintigraphy may be useful for determining anatomic variations such as Riedel's lobe[12)] or other anomalous lobes of the liver[11)13)]. In this case, however, with the accessory lobe of the liver on the left side, we had difficulty in differentiating the uptake of the spleen from that of the accessory hepatic lobe (Fig. 2).

CT scanning in the conventional supine position demonstrated a mass lesion, but it was difficult to identify an accessory lobe of the liver (Fig. 3).

Angiography failed to identify the accessory left lobe of the liver because of this region's hypovascularity (Fig. 4).

Hepatobiliary scintigraphy and CT were therefore performed after surgery. Hepatobiliary scintigraphy (Fig. 7) has the characteristic that the radiosiotope is not taken up by the spleen, but specifically by hepatic cells[14)15)]. Fig. 7 suggests radioisotope uptake by the accessory lobe of the liver. Hepatobiliary scintigraphy was of paramount importance in the radiological diagnosis of this case. Hepatobiliary scintigraphy is one of the most useful procedures for the differential diagnosis of accessory lobes of the liver and tumors.

CT using left anterior oblique scanning was also useful in confirming the diagnosis (Fig. 8).

Acknowledgment

We thank Dr. Walter J. Russell, Radiation Effects Research Foundation, Hiroshima, Japan, for his valuable editorial comments.

A talk based on this manuscript was presented at the One Hundred-second Kyushu Assembly of the Japan Radiological Society, in Fukuoka, Japan, Feb. 11-12, 1983.

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