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Oil Embolism of the Left Lobe of the Liver A Case Report

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肝左葉に局限した Oil Embolism の 1 例

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従来リンパ管造影後にみられる肝の oil embolism は、腸間膜内におけるリンパ管門脈吻合に基づくものとされ、画像上肝全体に広がる線状影もしくは顆粒影として報告されている。

今回我々は、リンパ管造影後に肝左葉にのみ局限する oil embolism を認め、CT にてその特異な

分布を確認し得た一例を経験したので若干の文献的考察を加えて報告し、更に造影剤が肝に到る経路として、従来言われている経路とは別に paraumbilical veins を介して肝に到達する可能性があることを指摘した。

Hepatic oil embolism (H.O.E.) has been reported as a rare complication of lymphangiography^{1)~9)}. Two of such cases were well shown by computed tomography (CT)⁹⁾. Most reported cases revealed diffuse distribution of H.O.E. throughout the liver. Presented here is a case of H.O.E. confined to the left lobe of the liver. We authors believe that no such cases have previously been described.

Case Report

A 49-year-old female was admitted to Kyushu University School of Medicine in January 1979 because of carcinoma of the left ovarian tube. A total hysterectomy and bilateral salpingo-oophorectomy were per-

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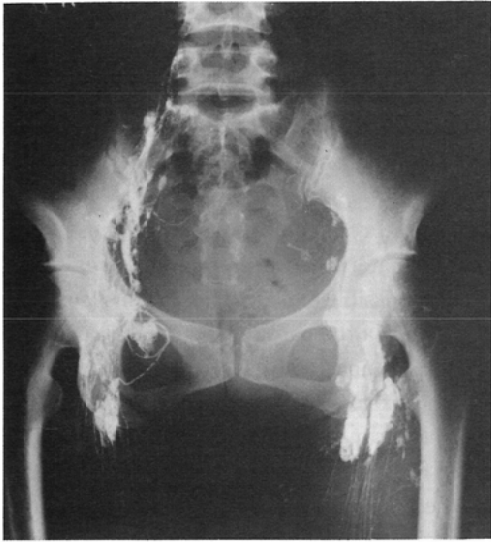


Fig. 1 Lymphangiogram immediately after injection, anteroposterior projection. Note lymphatic obstruction, markedly on the left.



Fig. 2 Lymphangiogram, right anterior oblique projection. Coarse arborizing pattern of the contrast material in the left portal radicles.

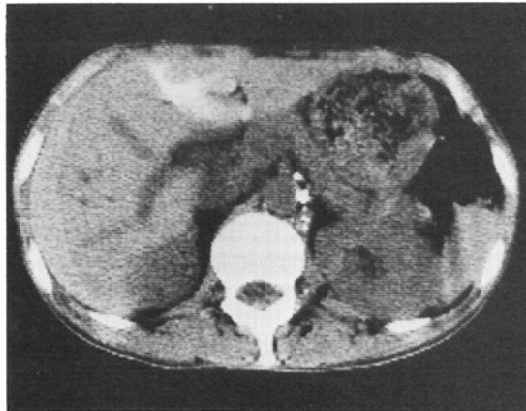


Fig. 3 CT demonstrated the contrast material to be localized in the left hepatic lobe.

formed, following which she was closely observed. She apparently did well until April 1981 when left inguinal lymphadenopathy and leg edema were detected.

Lymphangiography in September 1981 revealed nearly complete obstruction of the lymphatics in the lumbar region on the right, and in the iliac region on the left (Fig. 1). Simultaneously, there was progressive opacification with coarse arborizing structures in the left lobe of the liver (Fig. 2). CT 21 days later demonstrated oil embolism in the left hepatic lobe (Fig. 3).

Discussion

The term H.O.E. was first used by Leger et al. in 1961¹⁾. In 1965, Chavez showed that the involved contrast material was located in the portal veins²⁾. In 1968, Chavez and his coworkers, following their worldwide survey, reported observing H.O.E. in only 36 of 17,000 lymphangiograms, for a prevalence of 0.19%³⁾. The radiographic appearance of H.O.E. is described to be of increased density, and ranging from a linear, arborizing, to a granular pattern⁶⁾⁷⁾. For years it has been debated as to which pathway the contrast material takes to reach the liver. The most widely prevailing opinion is that this is via the lymphatic-portal venous communications²⁾⁵⁾.

If the contrast material reached the liver via the lymphatic-portal communications in the mesentery, it would have a diffuse distribution throughout the liver. The contrast material in the present case was confined to the left hepatic lobe, and this was well demonstrated by CT. The possible explanations for this localization in the left lobe include: (1) the contrast material can reach the liver via the paraumbilical veins, which normally empty into the left portal radicles, one of the most important anastomoses between the portal circulation and the systemic veins¹⁰⁾¹¹⁾; and (2) the contrast material reached the liver via the lymphatic-portal communications in the mesentery and was localized to the left lobe because of obstruction or severe stenosis of the right portal radicles. The normal laboratory data and the fact that CT revealed patency of the right portal radicles suggest that the latter was unlikely. Though the pathway by which the contrast material entered the paraumbilical veins is not clear, we can assume that the contrast material probably reached the left lobe via the paraumbilical veins, to result in its unique distribution in the liver.

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References

- 1) Leger, L., Buchet, R., Birty-Boely, C., Premont, M.: Introduction a l'etude de la lymphographie hepatique. Presse. Med. 69: 1981—1982, 1961
- 2) Chavez, C.M., Berrong, L.G., Evers, C.G.: Hepatic oil embolism after lymphangiography. Role of the systemicportal lymphaticovenous anastomosis. Am. J. Surg. 110: 456—460, 1965
- 3) Chavez, C.M., Picard, J., Davis, D., Fain, W., Corin, H., Hardy, J.: Hepatic oil embolism following lymphography. Presented at the Second International Congress of Lymphography, Miami, Florida, March 1968
- 4) Hecht, H., Berdon, W., Baker, D.: Hepatic oil embolization following lymphangiography in a child with neuroblastoma. Am. J. Roentgenol. 104: 860—864, 1968
- 5) Akisada, M., Tasaki, A., Lin, S., Hachiya, J.: Hepatic oil embolism: its clinical aspect and pathogenesis in Japanese. Nippon Act. Radiol. 28: 1656—1671, 1969
- 6) Bodie, J.F., Linton, D.S., Jr.: Hepatic oil embolization as a complication of lymphangiography. Radiology 99: 317—318, 1971
- 7) Ngan, H., James, K.W.: Hepatic oil embolism following lymphography. Br. J. Radiol. 51: 788—792, 1978
- 8) Feuerbach, V.S., Rupp, N., Reiser, M., Emmerich, B.: Lipidolembolie der Leber im Computertomogramm. Fortschr. Röntgenstr. 135: 604—605, 1981
- 9) Glazer, G.M., Nicol, R.F., Moss, A.A.: CT Demonstration of hepatic oil embolism following lymphangiography. J. Comput Assist. Tomogr. 5: 413—415, 1981
- 10) Popper, H., Schaffner, F.: Structure and function. McGraw-Hill, New York 1957
- 11) Netter, F.H.: The Ciba Collection of Medical Illustrations. Ciba Geigy, New York 1965