

Intrahepatic cholangiocarcinoma with brain metastases

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Background: Cholangiocarcinoma frequently causes metastasis to the lung, peritoneum, or pleura, but is not seen in the brain. Especially, primary brain metastasis from cholangiocarcinoma is not frequent as those compared to high risk areas with liver flukes. Herein, we present a rare case of primary brain metastasis from cholangiocarcinoma.

Case: A 58 year-old female visited our emergency room due to acute epigastric pain starting 7 days ago. She had a history of Crohn's disease with herpes zoster and denied smoking and drinking. After admission, as her C-reactive protein was 11.8 (mg/dl, reference range: 0~0.8) and had a fever of 40°C, she was on antibiotics. An abdominal pelvis computerized tomography (CT) showed multiple numerous low density lesions with a 11 cm diameter mass (Fig. 1-A). Her chest CT showed multiple lung metastasis (Fig. 1-B) and mediastinal metastasis, while her positron emission tomography showed multiple bone metastasis on multiple vertebrae (Fig. 1-C). Her liver biopsy resulted in moderately differentiated cholangiocarcinoma, and a ELISA of Clonorchis sinensis was negative. The patient complained increasing nausea, motion sickness and gait disturbance, which was regarded due to her liver mass. After being transferred to the oncology department for chemotherapy on the 14th hospital day, she complained total loss of sight and right side hearing difficulty. An immediate brain magnetic resonance image was taken which showed 1.7 cm diameter mass on her pituitary (Fig. 1-D), causing optic chiasm compression, multiple brain metastasis with leptomeningeal seeding and metastasis on her right acoustic nerve (Fig. 1-E). Radiotherapy or gamma knife surgery was considered, while intravenous steroids was administered. However, due to rapid progression, she was immobilized, and on her 20th hospital day, she expired due to diabetic insipidus, resulting from brain metastasis.

Conclusion: Primary brain metastases occurs only in 0.15% of cholangiocarcinoma. However, as this leads to poor prognosis, physicians should consider brain metastasis and perform brain workup immediately if the patient shows any neurologic signs.

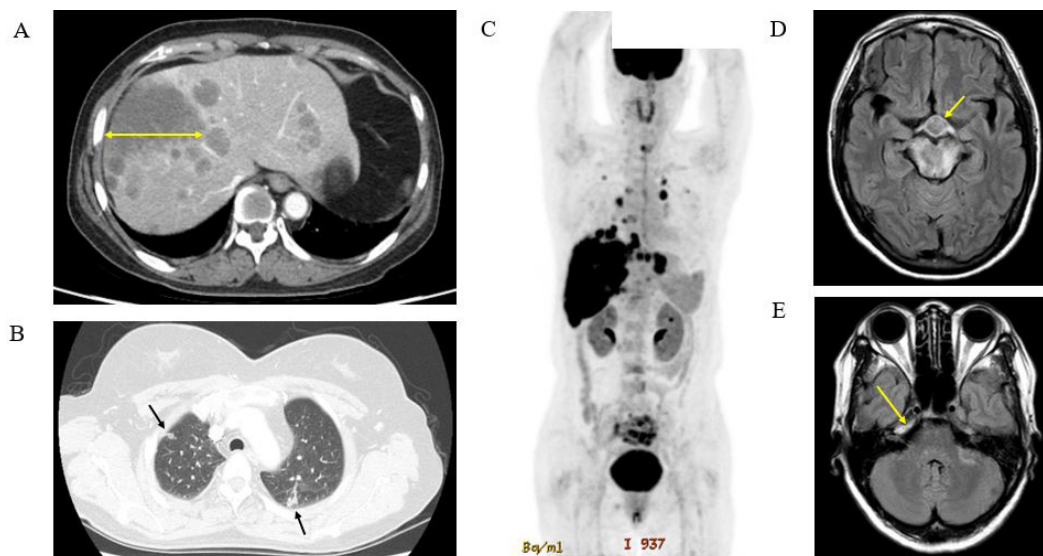


Figure 1. (A) Liver mass of 11 cm (long axis) in abdominal-pelvis computerized tomography (CT), (B) Chest CT showing multiple lung metastasis, (C) Positron emission tomography showing lung, liver, lung metastasis, (D) Brain magnetic resonance imaging (MRI) showing 1.7 cm mass on the pituitary, (E) Brain MRI showing right acoustic metastasis (yellow arrow)