中文題目：案例報告: 松果體精原細胞瘤經腦室腹腔引流管之腹腔內轉移

英文題目：Pineal gland gereminoma with intra-abdominal metastasis via ventriculoperitoneal shunt : A case report

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Case report:

A 36-year-old man presented with nausea, anorexia, epigastric pain, lower back pain, and body weight loss for 2 months. He had the history of an unresectable pineal germinoma (Figure A) status post definite radiotherapy 2 years ago. Ventricular peritoneal shunt was performed to relieve symptomatic obstructive hydrocephalus at bilateral and third ventricles. During the follow-up period, brain MRI and tumor markers showed good response to treatment without evidence of recurrence.

Pertinent physical examination showed epigastric tenderness with shifting dullness. There was no icteric sclera, hepatomegaly, or splenomegaly. Notably, a huge palpable mass over his right upper quadrant abdomen was found. Lab data revealed normal liver and renal function with mild anemia (11.9g/dL, normal: 13.5-18g/dL), thrombocytosis (525k/uL, normal: 150-400k/uL), and elevated lactic dehydrogenase level (322U/L, normal: 140-271U/L). Ultrasonography demonstrated a heterogeneous mass with the size of 14x12cm^2 and moderate amount ascites. Computed tomography of abdomen was performed to exclude hepatocellular carcinoma, which depicted multiple well-defined heterogeneous and homogeneous mass lesions with the largest size of 23x12cm^2 in the omentum and mesentery. None of the lesion revealed contrast enhancement during dynamic study (Figure B). Tumor markers demonstrated elevated total HCG (1202 mIU/mL, normal: 0-10mIU/mL), AFP (4507.8 ng/ml, normal: 0-20 ng/ml), and CEA (15.8 ng/ml, normal: 0-5 ng/ml) level with normal CA19-9, PSA, and SCC concentrations.

Sono-guided biopsy of the tumor showed picture of immature chondroid cells with few immature neuroectodermal components and some foci of chondroid tissue and ectodermal epithelial cells as well as necrosis (Figure C). Immunohistochemical stains revealed positive OCT-4 and CK, focal weakly positive of CD117, PLAP, and GFAP, confirming the diagnosis of mixed germ cell tumor. Scrotum sonography demonstrated

no remarkable abnormality of both testes. Pineal germinoma transformation to non-germinoma germ cell tumor (GCT) with seeding to peritoneal cavity via ventricular peritoneal shunt was diagnosed. The patient received Bleomycin, Etoposide, Cisplatin treatment, followed by tumor resection surgery and ventricular peritoneal shunt replacement. Abdominal computed tomography revealed no residual tumor lesion after the surgery (Figure D). The patient is now disease-free with regularly followed at outpatient department.

Discussion:

Intracranial GCTs could be classified as germinomas and nongerminomatous GCTs. Pure germinomas are nonsecreting tumors, while AFP may be secreted by nongerminomatous GCTs [1], including endodermal sinus tumor, mixed GCTs, and immature teratoma. Although tumor markers play an important role in differentiating GCTs, definite diagnosis depends on pathological proof. The elevated AFP and total HCG levels along with definite pathology findings in our case confirmed the diagnosis of nongerminomatous GCTs, which is transformed from pineal germinoma and metastatic to peritoneal cavity via ventricular peritoneal shunt, consistent with previous studies [2][3].

We suggested that carefully physical examination and closely follow up the abdominal condition are necessary in the patients with the history of intracranial GCTs undergoing ventricular peritoneal shunt implantation.

Figure A

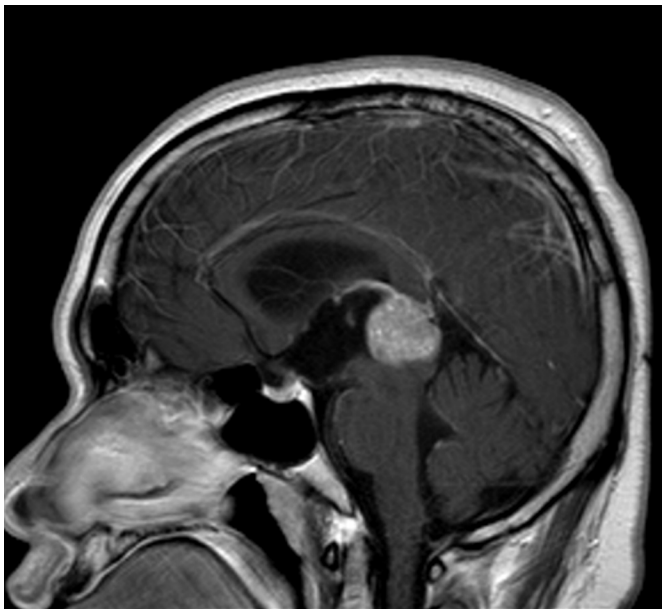


Figure B

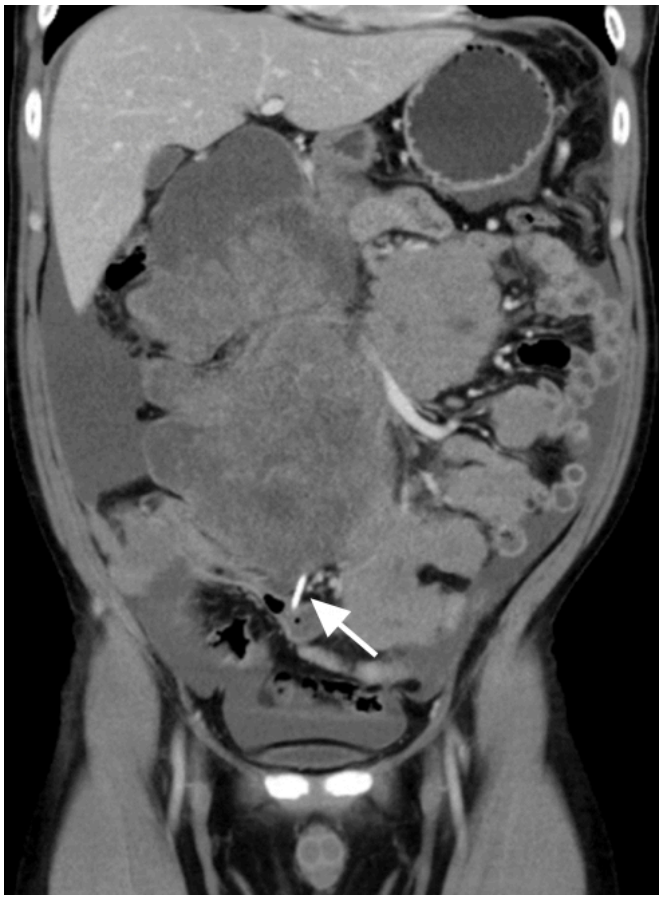


Figure C

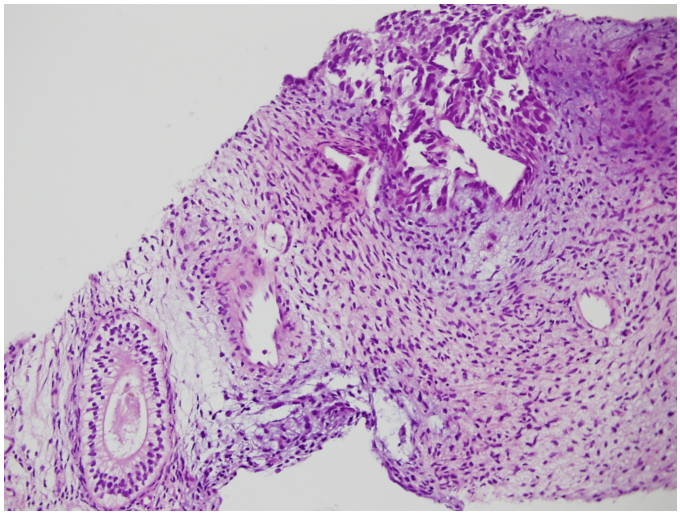
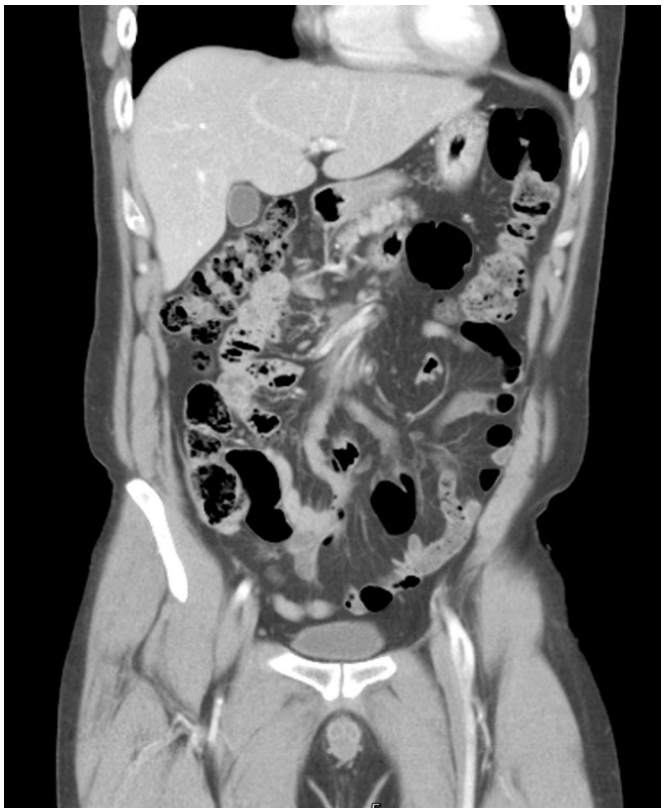


Figure D



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