

## Bilateral subdural hemorrhage as a possible adverse event of dasatinib in a patient with Philadelphia chromosome-positive acute lymphoblastic leukemia

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Dasatinib, a multi-kinase inhibitors that is active against BCR-ABL1 and SRC family kinase, has been reported to efficacy in the treatment of imatinib resistant or intorlerent Philadelphia chromosome (Ph)-positive acute lymphoblastic leukemia (ALL). Although dasatinib therapy is well tolerated, severe hematological or non-hematological adverse events are occasionally observed. We report here an unusual case of bilateral subdural hemorrhage(SDH) in patient with ALL treated dasatinib. A 58-year-old woman had been diagnosed with Ph-positive ALL, underwent allogeneic stem-cell transplantation (SCT) .At 71 days after SCT, we identified the disease was relapsed. So, dasatinib (70 mg twice daily) was initiated. At 4 weeks after dasatinib therapy, she complained severe headache. A computed tomography (CT) displayed bilateral subdural hemorrhage. She had no trauma history. Platelet counts were 42,000/mm<sup>3</sup>, prothrombin time and activated partial thromboplastin time were within normal ranges, and magnetic resonance imaging revealed no evidence of vascular lesions. Dasatinib was discontinued because a causal relationship between dasatinib and SDH could not be excluded. After discontinuation of dasatinib, her headache was improved, and we rechallenged dasatinib 140 mg. The patient had headache again 1 month after dasatinib readministration. CT of the head was repeated and finding was consistent with bilateral chronic SDH, when the platelet count was 38,000/mm<sup>3</sup>. Dasatinib was discontinued again, imatinib (600 mg a day) was restarted as an alternative to dasatinib. Although SDH was no longer increased, the patient had a disease progression and died from pneumonia after initiation of salvage chemotherapy. Recently, it has been reported that dasatinib might affect platelet function, even its mechanism was not clearly understood. Additionally, bleeding tendency could be more deteriorated by synergy with thrombocytopenia. This suggests that dasatinib may be associated with bilateral SDH in this patient. In summary, we report a patient with Ph-positive ALL who developed bilateral SDH after treatment of dasatinib. We expect that this unusual case may provide an example for physicians being involved in the treatment with dasatinib.

## A Case of Acute Parotitis Related to L-Asparaginase Therapy

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**Introduction:** L-Asparaginase is one of the chemotherapeutic agent as induction therapy for acute lymphoblastic leukemia and lymphoma. Well known adverse effects of L-asparaginase are allergy, thromboembolism, pancreatitis, and endocrine dysfunction such as hyperglycemia or lipid metabolism. But, acute parotitis is one of the rarest side effects caused by L-asparaginase. So we report the case of acute parotitis due to L-asparaginase. **Case report:** 22-year-old woman was hospitalized with painless swelling on both submandibular area. She had been taken the first cycle of chemotherapy consisting of dexamethasone, methotrexate, ifosfamide, etoposide and L-asparaginase for recurrent NK-T cell lymphoma until ten days before this admission. Vital signs were stable, and there was nontender swelling on both submandibular area. Laboratory findings showed hemoglobin level was 8.6 g/dL, platelet count 214,000/μL, WBC count 2,100/μL(Absoluted neutrophil counts:855), blood urea nitrogen 13 mg/dL, creatinine 0.48 mg/dL, C-reactive protein 0.47 mg/dL(0.01~0.29), amylase 115.4 U/L (28~100), lipase 38 U/L (13~60). Neck computed tomography revealed both symmetrical prominent parotid and submandibular glands without remarkable focal mass like lesions or infection foci. Serum amylase level was normally decreased to 82 U/L at the third admission day. We started chemotherapy two days later. 12 mg of dexamethasone was administered intravenously, and then both submandibular swelling were decreased and subsided on next day. **Discussion:** The mechanism of the acute parotitis related L-asparaginase are not well identified. Because of it's similarity with pancreas as digestive organs with high rates of protein synthesis, the depletion of L-asparagine may affect the parotid glands. In conclusion, L-asparaginase should be used carefully, and we should pay attention to occurrence of acute parotitis as acute pancreatitis. And when acute parotitis is suspicious, we should try to find other cause or complication such as viral infection or suppurative parotitis by mumps IgM Ab or radiologic finding. And we suggest of possible relationship the recovery of acute parotitis caused by L-asparaginase and use of steroid.