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Burkitt's lymphoma causing acute pancreatitis in a child

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ABSTRACT

A 8-year-old boy admitted with abdominal pain, fever and vomiting for the previous 10 days. Sensitivity was detected in the epigastric area. There was not defense and rebound. Aspartate aminotransferase was 106 U/L, alanine aminotransferase 25 U/L, alkaline phosphatase 311 U/L, blood amylase level 748 U/L, blood lipase level 391 U/L. In thoracic CT, soft tissue with smooth contours measuring 32 mm×28 mm was identified in the posterior mediastinum. Bone marrow aspiration biopsy was normal. A mass specimen obtained from the duodenum endoscopic biopsy. This specimen was diffuse staining by leukocyte common antigen, CD10 and CD20. The patient was diagnosed with acute pancreatitis associated with stage 3 duodenal Burkitt's lymphoma. Modified LMB-98 was initiated. Burkitt's lymphoma may rarely cause acute pancreatitis.

1. Introduction

Burkitt's lymphomas or their variants (approximately 40% of non-Hodgkin lymphomas) seen in child age. Sporadic Burkitt's lymphoma is most common involvement in the abdomen. Approximately 25%–30% of children are develop acute abdomen due to the right lower quadrant mass or ileo-cecal invagination. The initial presentation of disease occurs are abdominal pain, nausea, vomiting, gastrointestinal bleeding or perforation[1,2]. Non-Hodgkin's lymphoma can begin acute pancreatitis rarely[3].

We reported 8-year-old boy who developed acute pancreatitis due to duodenal involvement with Burkitt's lymphoma.

2. Case report

A 8-year-old boy admitted with abdominal pain, fever and

vomiting for the previous 10 days. His personal and family history was unremarkable. The general situation moderate and he was conscious his physical examination. Sensitivity was detected in the epigastric area. There was not defense and rebound. There was not organomegaly and peripheral lymphadenopathy. In the laboratory examination, white blood cell count was 7800 mm³, hemoglobin 13.8 g/dL and thrombocyte count 428 mm³. Aspartate aminotransferase was 106 U/L, alanine aminotransferase 25 U/L, alkaline phosphatase 311 U/L, blood amylase level 748 U/L, blood lipase level 391 U/L. Serum albumin, glucose, urea, creatinine, and electrolyt values were normal limits. Sedimentation was 20 mm/h and C-reactive protein was 3 mg/dL. In the abdominal ultrasonography, the pancreas was enlarged and fluid in a rim pattern was identified. Pancreatic duct was apparent. Multiple lymphadenopathy was determined in the mesenteric area (Figure 1). The thickest part of the duodenum was measured at 15 mm in the abdominal computed tomography (CT). The pancreatic duct was remarkable and measured 3.5 mm. Diffuse wall thickening and perihepatic fluid were observed (Figure 2). There was not periduodenal lymphadenopathy and peripancreatic lymphadenopathy. In thoracic CT, soft

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tissue with smooth contours measuring 32 mm × 28 mm was identified in the posterior mediastinum. Brain CT was normal. Bone marrow aspiration biopsy was normal. A mass specimen obtained from the duodenum endoscopic biopsy. This specimen was diffuse staining by leukocyte common antigen, CD10 and CD20. The patient was diagnosed with acute pancreatitis associated with stage 3 duodenal Burkitt's lymphoma. Modified LMB-98 was initiated. Blood amylase and lipase levels of the patient were arrived normal limits in the past of the one week chemotherapy. Unfortunately, the patient was lost in the initial month of chemotherapy due to febrile neutropenic sepsis.



Figure 1. Transverse sonogram of the epigastrium demonstrates diffuse enlarged hypoechoic pancreas, dilatation of biliary (black arrow) and pancreatic duct (arrow head), distension of the gall bladder (thin arrow), hypoechoic mass (thick arrow) surrounding the lumen of the duodenum.

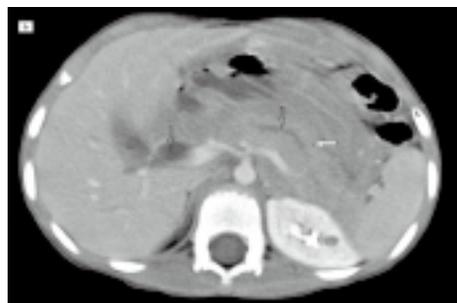


Figure 2. Post-contrast axial abdominal CT image shows diffusely enlarged pancreas (white arrow), dilatation of biliary and pancreatic duct (black arrows).

3. Discussion

Burkitt's lymphomas are fairly aggressive B-cell tumors characterized with chromosome 8 translocation and C-myc gene^[4]. Abdominal involvement can develop in the duodenum, cecum, between ascending colon and jejunum, and within the pelvis. Primary lymphoid lymphoma which constitutes less than 5% of all small bowel lymphomas is a rarely encountered condition developing due to lack of duodenal lymphoid tissue. Nonspecific indications may sometimes persist for years prior to diagnosis^[5]. In our patient appeared abdominal pain, fever and vomiting. There was not weight loss, edema, obstructive symptoms and

gastrointestinal bleeding.

Considering the low incidence of Burkitt's lymphoma, it is rare for it to manifest itself as acute pancreatitis on admission^[6]. Acute pancreatitis developing due to pancreatic involvement has been rarely reported in Burkitt's lymphoma^[3,7]. Moreover, a case presentation of acute pancreatitis developed due to solitary hepatic Burkitt's lymphoma^[8]. Glória *et al*^[9] reported a duodenal infiltrative Burkitt's lymphoma by ultrasonography, CT and endoscopy followed-up with diagnoses of acute pancreatitis, pleural effusion and acid in a 13-year-old boy. They were full remission with chemotherapy in their patient.

We associated the increase in blood amylase and lipase levels with the acute pancreatitis related to the rapid growth of Burkitt's lymphoma. No cholestasis was detected. Following chemotherapy for Burkitt's lymphoma, it was observed that the clinical and laboratory course of acute pancreatitis improved completely at the initial week. We lost the patient in the initial month of chemotherapy due to febrile neutropenic sepsis.

In conclusion; Burkitt's lymphoma may rarely cause acute pancreatitis.

Conflict of interest statement

We declare that we have no conflict of interest.

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