



Contents lists available at ScienceDirect

Journal of Acute Disease

journal homepage: www.jadweb.org



Document heading doi: 10.1016/S2221-6189(13)60119-5

Burkitt's lymphoma causing acute pancreatitis in a child

Muhammed Akıl¹, Avni Kaya^{2*}, M.Selçuk Bektaş², Fesih Aktar¹, Sinan Akbayram¹, Salim Bilici³, Mehmet Beyazal⁴

¹Yüzüncü Yıl University, Faculty of Medicine, Departments of Pediatrics Van, Turkey

²Van Women's and Children's Hospital, Van, Turkey

³Yüzüncü Yıl University, Faculty of Medicine, Departments of Pediatric Surgery Van, Turkey

⁴Yüzüncü Yıl University, Faculty of Medicine, Department of Radiology, Van, Turkey

ARTICLE INFO

Article history:

Received 10 January 2013

Received in revised form 15 January 2013

Accepted 15 March 2013

Available online 20 June 2013

Keywords:

Abdominal pain

Child

Duodenum

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

*Corresponding author: Dr. Avni Kaya, Pediatrician, MD, Van Women's and Children's Hospital, Van, Turkey.
Office: +904322171983
Mobil: +905052677045
Fax: +904322150479
E-mail: avnikaya@gmail.com

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.

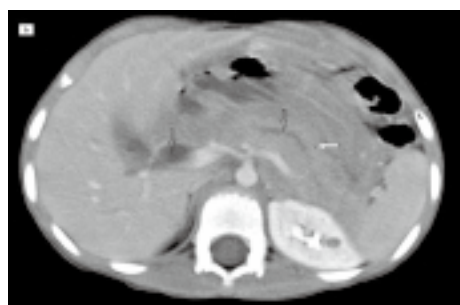


Figure 2. Post-contrast axial abdominal CT image shows diffusely enlarged pancreas (white arrow), dilatation of biliary and pancreatic duct (black arrows).

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.

References

- [1] Link MP, Weinstein HJ. Malignant non-Hodgkin lymphomas in children. In: Pizzo PA, Poplack DG (eds). *Principles and practice of pediatric oncology*. Philadelphia: Lippincott Williams and Wilkins; 2006, p. 728–747.
- [2] Magrath I. B-cell lymphoma/Burkitt lymphoma. In: Weinstein HJ, Hudson MM, Link PM (eds). *Pediatric lymphomas*. New-York: Springer; 2007, p. 142–168.
- [3] Amodio J, Brodsky JE. Pediatric Burkitt lymphoma presenting as acute pancreatitis: MRI characteristics. *Pediatr Radiol* 2010; **40**: 770–772.
- [4] Toma P, Granata C, Rossi A, Garaventa A. Multimodality imaging of Hodgkin disease and non-Hodgkin lymphomas in children. *Radiographics* 2007; **27**: 1335–1354.
- [5] Smith C, Kubicka RA, Thomas CR Jr. Non-Hodgkin lymphoma of the gastrointestinal tract. *Radiographics* 1992; **12**: 887–899.
- [6] Benifla M, Weizman Z. Acute pancreatitis in childhood: analysis of literature data. *J Clin Gastroenterol* 2003; **37**: 169.
- [7] Francis IR, Glazer GM. Burkitt's lymphoma of the pancreas presenting as acute pancreatitis. *J Comput Assist Tomogr* 1982; **6**: 395–397.
- [8] Wan YL, Chen WJ, Huang SC, Lee TY, Tsai CC. Solitary hepatic Burkitt lymphoma presenting as acute pancreatitis. *Pediatr Radiol* 1988; **18**: 160.
- [9] Glória Silva F, Paiva M, Tavares A, Lacerda A, Pereira G, Marques A, et al. Paediatric Burkitt lymphoma presenting as acute pancreatitis. *Acta Med Port* 2008; **21**: 515–520.