LETTER

Is Bortezomib a Rare Cause of Acute Pancreatitis?

Tevfik Solakoglu[1], Mustafa Akar[1], Tugba Aktan Kosker[2], Semnur Buyukasik[1], Osman Ersoy[3]

Departments of [1]Gastroenterology and [2]Internal Medicine, Ankara Ataturk Education and Research Hospital; [3]Department of Gastroenterology, Yildirim Beyazit University, Faculty of Medicine. Ankara, Turkey

Dear Sir,

Recently we have read an interesting case with bortezomib-induced pancreatitis in JOP. Journal of the Pancreas (Online) by Elouni *et al*. [1]. To the best of our knowledge, this was the first reported case of bortezomib-induced acute pancreatitis in the English literature. We know that drug-induced pancreatitis is rare and each year the list of drugs associated with acute pancreatitis increases. Bortezomib is a new drug which is selective and reversible proteasome inhibitor used for the treatment of patients with multiple myeloma [2]. Herein we present a case of acute pancreatitis induced by bortezomib.

A 47-year-old man presented with a severe abdominal pain radiating to the back. On physical examination, there was a mildly distended abdomen with epigastric tenderness but other system examinations were normal. Physical examination revealed no evidence of acute abdomen. He had not a past history of jaundice, abdominal pain, alcoholism, trauma, hyperparathyroidism or family history of pancreatitis. He was not receiving any other drug except bortezomib, dexamethasone and zoledronic acid. In his medical history he was diagnosed with multiple myeloma and received vincristine, adriamycin and dexamethasone regimen plus zoledronic acid as initial treatment for multiple myeloma. This protocol repeated every 28 days. After 2 cycles of the treatment, vincristine, adriamycin, dexamethasone regimen was stopped and the regimen of bortezomib plus dexamethasone was administered to the patient but zoledronic acid treatment was continued. On the seventh day after the second dose of bortezomib abdominal pain was began in the patient. His serum amylase and lipase levels were elevated and he was diagnosed as acute pancreatitis. Viral serology for hepatitis A, B, C viruses, cytomegalovirus, Epstein-Barr and herpes virus were all negative. There was no evidence of hypertriglyceridemia, hypercholesterolemia and hypercalcemia on investigations. Abdominal ultrasound was normal. The other causes of pancreatitis were excluded and bortezomib was suspected as the etiology of acute pancreatitis. All drugs were stopped and the patient received symptomatic medical treatment. Serum amylase and lipase were normalized and his clinical status had improved gradually and he was discharged from hospital 2 days after admission. On day 2 after discharging from hospital he received the third dose of bortezomib. After 2 days receiving the third dose of bortezomib he was admitted to the hospital again with a severe abdominal pain radiating to the back and nausea. On physical examination, there was an epigastric tenderness and his serum amylase (493 U/L; reference range: 28-100 U/L), lipase (>736; reference range: 13-60 U/L), CRP (7.63 mg/dL; reference range: 0-0.8 mg/dL), and LDH (1,902 U/L; reference range: 135-214 U/L) were elevated. In laboratory tests, serum triglyceride (131 mg/dL; reference range: 0-200 mg/dL), LDL-cholesterol (77.8 mg/dL; reference range: 0-130 mg/dL), calcium (8.8 mg/dL; reference range: 8.6-10.0 mg/dL), and white blood cell (4,550/mm^3; reference range: 4,000-11,000/mm^3) were normal. Hemoglobin was 9.8 g/dL (reference range: 12-16 g/dL), platelet count was 83,000/mm^3 (reference range: 150,000-450,000 U/L) while the other routine laboratory tests were normal. Abdominal computed tomography (CT) scan revealed an edematous pancreas, bilateral pleural effusion and

Received September 6th, 2013 – Accepted September 26th, 2013

Key words bortezomib; Multiple Myeloma; Pancreatitis, Acute Necrotizing

Correspondence Tevfik Solakoglu
Department of Gastroenterology; Ankara Ataturk Education and Research Hospital; Bilkent; Ankara, 06800; Turkey
Phone: +90-312.291.2525; Fax: +90-312.291.2126
E-mail: tfksolak@yahoo.com.tr

there were neither peripancreatic fluid collections nor biliary dilatation. All other causes of pancreatitis, except drug, were excluded. All drugs were stopped and the patient received symptomatic medical treatment. Three days after admission, he was discharged from hospital clinically good and serum amylase (57 U/L), lipase (38 U/L) and CRP (0.6 mg/dL) normalized. After discontinuing bortezomib, he has not suffered a new pancreatic attack for one month.

The mechanism of action for drug-induced acute pancreatitis is not clear and based on theories extracted from case reports, case-control studies, animal studies, and other experimental data [3]. Diagnosis of drug-induced acute pancreatitis depends on clinicians excluding other possible causes. The incidence of drug-induced acute pancreatitis is generally estimated from case reports [3]. The presented case suggests a causal relation between bortezomib and pancreatitis. Recently, a new case was reported by Mihaila [4] from Romania in the March 2013. This case report supports our idea. It is essential that more data are obtained in order to strengthen the causality of this relationship.

In conclusion, pancreatitis should be considered in a patient under bortezomib therapy presenting with abdominal symptoms.

Disclaimer There are no sources of funding or potential conflicts of interest to disclose

References

1. Elouni B, Ben Salem C, Zamy M, Sakhri J, Bouraoui K, Biour M. Bortezomib-induced acute pancreatitis (Letter). JOP. J pancreas (Online) 2010; 11:275-6.

2. Kane RC, Bross PF, Farrell AT, Pazdur R. Velcade: U.S. FDA approval for the treatment of multiple myeloma progressing on prior therapy. Oncologist. 2003;8:508-13.

3. Nitsche CJ, Jamieson N, Lerch MM, Mayerle JV. Drug induced pancreatitis. Best Pract Res Clin Gastroenterol. 2010;24:143-55.

4. Mihaila RG. A possible rare complication of bortezomib treatment: acute pancreatitis. Acta Medica Transilvanica 2013; 2:269-71.