Protracted cisplatin-induced vomiting responding to mosapride

Sir,

Acute vomiting (onset: within 24 hours) and delayed vomiting (onset after 24 hours, resolution by one week) are well described complications of cisplatin.[1] A syndrome of "prolonged vomiting" lasting more than two weeks after chemotherapy has been described.[2] We encountered a patient of nasopharyngeal carcinoma who developed prolonged vomiting after cisplatin and concurrent radiation therapy.

A 35-year-old female with nasopharyngeal carcinoma (T2N2M0, stage III) received two cycles of Paclitaxel and Carboplatin, followed by concurrent chemoradiation (70 Gray with seven doses cisplatin 40 mg/m^2/week). Antiemetic support (starting from day one of each cycle) included ondansetron (8 mg TID for three days), metoclopramide (10 mg TID for three days), and dexamethasone (4 mg TID for three days). She developed acute grade 3 emesis (NCI CTC v3.0 - required IV fluids for 48 hours) after the fourth dose of cisplatin, so aprepitant (125 mg PO D1, 80 mg PO D2, and D3) was added from the next cycle. The fifth and sixth doses were well tolerated. Forty-eight hours after the seventh dose of cisplatin she developed Grade 4 nausea and vomiting and presented with dehydration, hypokalemic alkalosis, and symptomatic hypocalcemia (carpopedal spasms). The deficits were corrected with intravenous fluids and electrolyte supplements (potassium, calcium, and magnesium), but the vomiting could not be controlled with dexamethasone (4 mg IV eight hourly), metoclopramide (20 mg IV six hourly), and lorazepam (1 mg PO TID).

Two weeks after chemoradiation was stopped, the vomiting (nonprojectile, nonbilious, containing undigested food particles and occurring within half hour of food intake) persisted and she remained dependent on parenteral support. She complained of tingling sensations over her fingers and toes (grade

l neuropathy), but tendon jerks were diminished. A computed tomography (CT) scan of the brain was normal. Renal and liver function, electrolytes (including magnesium and calcium), blood gases, and hematologic parameters had normalized post admission. There was no intestinal dilation on abdominal radiography and no abnormality was noted on gastroduodenoscopy or abdominal sonography. Studies for gastric emptying could not be done.

Gastric outlet obstruction was suggested by the clinical presentation, but there was no demonstrable lesion. Gastric paresis was considered and Tab. Mosapride 5 mg TID was started (subsequently increased to 10 mg TID). Vomiting decreased rapidly and within 72 hours she was able to tolerate oral diet. Within seven days of starting Mosapride she was discharged on a normal diet. She completed her radiotherapy course without further issues. Mosapride was continued in the same dose during this period.

Chemotherapy-induced delayed vomiting usually resolves within one week. Other causes must be considered in any vomiting lasting beyond one week. "*Prolonged vomiting*" is not a widely used term, but symptoms lasting for more than two weeks after completion of chemotherapy have been thus described.[2] Gastric paresis may be one of the causes of prolonged vomiting and has also been described after cisplatin use, where it has been seen as a part of autonomic neuropathy (cumulative dose of cisplatin (560 mg/m^2).[2,3]

Our patient had sensory neuropathy, but had no features of dysautonomia. Although the cumulative dose of cisplatin in our patient was only 280 mg/m^2, previous treatment with neurotoxic drugs (paclitaxel), absence of other causes, and prompt response to prokinetic agents argue toward the possibility of cisplatin-induced autonomic neuropathy leading to gastric paresis in this patient. Prompt recognition of this entity and early treatment with prokinetic agents might avoid much patient distress.

Ganesan P, Sharma A, Mohanti BK[1], Gogia A

Departments of Medical Oncology and [1]Radiation Oncology, Dr. B.R.A. Institute, Rotary Cancer Hospital, All India Institute of Medical Sciences, New Delhi – 110 029, India

Correspondence to: Dr. Atul Sharma,
E-mail: atul1@hotmail.com

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