Palliative Care Rounds

Successful Palliation with Octreotide of a Neuroendocrine Syndrome from Malignant Melanoma

Alexander W. Jahng, MS and Solomon S. Liao, MD
Department of Medicine, University of California at Irvine Medical Center, Orange, California, USA

Abstract
We present a unique case of a neuroendocrine syndrome in a patient with Stage IV vaginal melanoma metastatic to the liver that was successfully palliated with octreotide. Similar to the carcinoid syndrome, the patient exhibited chronic diaphoresis, intermittent low-grade fevers, dizziness, nausea with vomiting, and hot flashes. The symptoms on admission of acute hypotension, acute exacerbation of abdominal pains, and intractable nausea with vomiting suggested a neuroendocrine crisis secondary to massive degranulation and hormone release. Consistent with our hypothesis, her plasma chromogranin A was found to be elevated. Octreotide was used successfully to palliate her symptoms. When the octreotide was stopped, all her symptoms returned. As the use of octreotide is gaining application in palliative care, this case highlights the effectiveness of its use in a select group of patients whose symptoms would be otherwise difficult to manage. J Pain Symptom Manage 2006;32:191–195.

Key Words
Melanoma, neuroendocrine syndrome, octreotide, somatostatin, chromogranin

Introduction

Neuroendocrine syndrome poses a unique challenge for the palliative care clinician. Aside from symptoms such as pain or obstruction resulting from the tumor mass itself, the syndrome manifests with rather diverse symptoms that are dependent on the nature of mediators produced and frequently debilitate the patient's quality of life.[1–3]

Fortunately, most symptoms can now be palliated to a significant degree with the synthetic analogs of somatostatin.[1–3] Somatostatin is a gastrointestinal hormone that antagonizes the effect of other hormones, and functions grossly to shut down the gut. Octreotide was the first analog to receive approval from the U.S. Food and Drug Administration in 1988 specifically for the palliation of carcinoid and Verner–Morrison syndromes.[4] Since then it has found other palliative uses, including the management of intractable diarrhea from AIDS, malignant gastrointestinal obstruction, and ascites.[5–8] In general medical/surgical usage, it has found indications in temporizing gastrointestinal variceal bleeding, preventing postoperative pancreatic complications, and treating acute pancreatitis.[9–11]

Address reprint requests to: Solomon S. Liao, MD, UCI Medical Center, Building 58, Room 101, ZC4076H, 101 The City Drive, Orange, CA 92868, USA. E-mail: ssliao@uci.edu

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In this case report, we describe a patient who presented with a neuroendocrine syndrome secondary to malignant vaginal melanoma and responded to octreotide. Although melanoma shares common origins with classic neuroendocrine tumors, a literature search revealed that no such cases have been described previously.

Case Report

A 64-year-old woman was diagnosed two years earlier with Stage IV vaginal melanoma, with metastatic lesions in the liver, right adrenal gland, lymph nodes, and other sites. She underwent radiation therapy and resection of a right frontal epidural lesion. She had chemotherapy with cisplatin, and received transdermal fentanyl for pain from liver metastases.

The patient presented to the emergency department 24 hours postchemotherapy with intractable nausea with vomiting (nonbloody, nonbilious), low-grade fever of 38.5°C, hypotension of 62/43 mmHg, and exacerbated right upper quadrant and epigastric pain (9/10 from a baseline of 5/10). She denied any other symptoms at this time, including syncope, nuchal rigidity, palpitations, and diarrhea. She had no family history of malignancies.

On physical examination, she was moderately uncomfortable, diaphoretic, and alert and oriented to person, place, and time. She had mild scleral icterus and preexisting strabismus. Cardiopulmonary examination was unremarkable, and abdominal examination revealed tenderness to palpation in the right upper quadrant and the epigastric regions, with some guarding, and normal bowel sounds. No organomegaly was noted. No bruits were noted in the neck or the abdomen. Pulses were 2+ in all four extremities, without cyanosis or edema. Neurological examination was normal.

Her laboratory data showed mild hyponatremia at 131 mEq/L; other electrolytes were normal. Anemia and thrombocytopenia were preexisting and stable. Her peripheral white cell count and differential were normal, and the cultures of blood and urine ultimately proved to be negative. Serial cardiac enzymes and electrocardiogram were normal. Hepatic function panel showed a mild diffuse elevation of transaminases that were unchanged, and a recent computed axial tomography scan of the hepatobiliary system did not demonstrate any biliary obstruction, including stones.

Blood pressure rose to 107/61 mmHg after 2 L of normal saline was administered. Despite dexamethasone treatment, and as-needed intravenous ondansetron, prochlorperazine suppositories, and lorazepam injections, her nausea was not controlled. She continued to have nonbloody, nonbilious vomiting with either solids or liquids. This vomiting averaged about three times a day. On Hospital Day 2, she also began to experience breakthrough right upper quadrant and epigastrium pain.

A palliative medicine consultation revealed a history of intermittent low-grade fevers at home, diaphoresis, light-headedness, and hot flashes for two months. She was also found to be diaphoretic on exam. An intravenous octreotide infusion at 25 μg/h was started at the recommendation of the palliative service. She reported resolution of her diaphoresis, hot flashes, dizziness, and right upper quadrant and epigastric pain. Her plasma chromogranin A level prior to octreotide treatment was elevated (215 ng/mL; normal <50 ng/mL). Her nausea and vomiting moderately improved. Changing her ondansetron to routine administration controlled her nausea sufficiently to enable her to be discharged home with hospice care and octreotide 200 μg subcutaneous three times a day.

Unfortunately, octreotide was stopped when the home hospice care started, because the contracted hospice agency chose not to cover the medication and the family could not afford it. All of the patient's symptoms returned and were not controlled throughout her hospice stay. The patient died from her cancer one month following hospital discharge.

Discussion

We describe a case of malignant melanoma with clinical features of a neuroendocrine syndrome. The patient's baseline symptoms included diaphoresis, hot flashes, nausea with vomiting, and light-headedness—a complex that bears a striking resemblance to carcinoid syndrome.[12] Neuroendocrine syndrome is