## IMAGES IN CLINICAL MEDICINE

Lindsey R. Baden, M.D., Editor

## Intermittent Facial Flushing and Diarrhea



67-YEAR-OLD MAN PRESENTED TO HIS GENERAL PRACTITIONER WITH A history of vague abdominal discomfort on the right side, intermittent diarrhea, and episodes of facial flushing every 2 to 3 days. He reported no history of ingestion of alcohol or other precipitants of flushing. Images obtained before and after the onset of symptoms show the patient without and with a flush (Panels A and B, respectively). Two hepatic lesions were detected on ultrasonography, and an additional hepatic lesion and a mass in the midgut were seen on computed tomography (CT). An ultrasound-guided liver biopsy was performed, and histologic analysis of the biopsy specimen revealed a well-differentiated neuroendocrine tumor. The chromogranin A level was elevated, at 765 ng per milliliter (normal range, 19.4 to 98.1), and a 24-hour urinary collection showed a 5-hydroxyindoleacetic acid level of 1524  $\mu$ mol (normal range, 2.5 to 50.0  $\mu$ mol). Scintigraphy performed with the use of indium-111-labeled pentetreotide revealed metastases in the liver and the axial skeleton (Panel C). The patient was treated with octreotide; the diarrhea ceased, and the frequency of facial flushing was reduced. However, a CT scan obtained at a 2-year follow-up showed progressive liver and bone metastases, and the treatment was changed to everolimus, which was followed by clinical and radiologic improvement. A recent echocardiogram showed trace tricuspid regurgitation.

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Orla Mc Cormack, M.D. John V. Reynolds, M.D.

St. James's Hospital Dublin, Ireland orlamccormack@hotmail.com

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