IMAGE OF INTEREST

Korean J Intern Med 2017;32:378-379
https://doi.org/10.3904/kjim.2015.397

A huge necrotic liver mass in a 45-year-old woman: delayed hepatic metastasis of a gastrointestinal stromal tumor

In Yong Whang[1], Kyung-Jin Seo[2], Hee Yeon Kim[3], Chang Wook Kim[3], and Hye Sung Won[3]

Departments of [1]Radiology, [2]Hospital Pathology, and [3]Internal Medicine, Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

Received: December 11, 2015
Revised : January 21, 2016
Accepted: March 15, 2016

Correspondence to
Kyung-Jin Seo, M.D.
Tel: +82-31-820-3158
Fax: +82-31-820-3877
E-mail: ywacko@catholic.ac.kr

A 45-year-old woman was referred with a huge mass of the liver. She complained of a vague abdominal discomfort that had persisted for 1 month. She had no history of liver disease, and physical examination revealed mild abdominal distension. Pertinent laboratory test results were unremarkable. She had a history of small intestinal resection for a gastrointestinal stromal tumor (GIST) 11 years prior (Fig. 1A). Computed tomography (CT) showed a heterogeneous hypervascular tumor with central necrosis, occupying left hemiliver and right paramedian sector of the liver, measuring 20 × 13 cm (Fig. 1B). Positron emission tomography-CT using ^{18}F-fluorodeoxyglucose showed intense hypermetabolic activity (maximum standardized uptake value 8.2) along the peripheral solid portion of the tumor with central photon defect area representing necrosis (Fig. 1C). A tumor biopsy revealed small round/spindle-shaped cells surrounded by fibrous tissue. Immunohistochemical stainings revealed vimentin reactivity, as well as CD117 reactivity. On c-kit

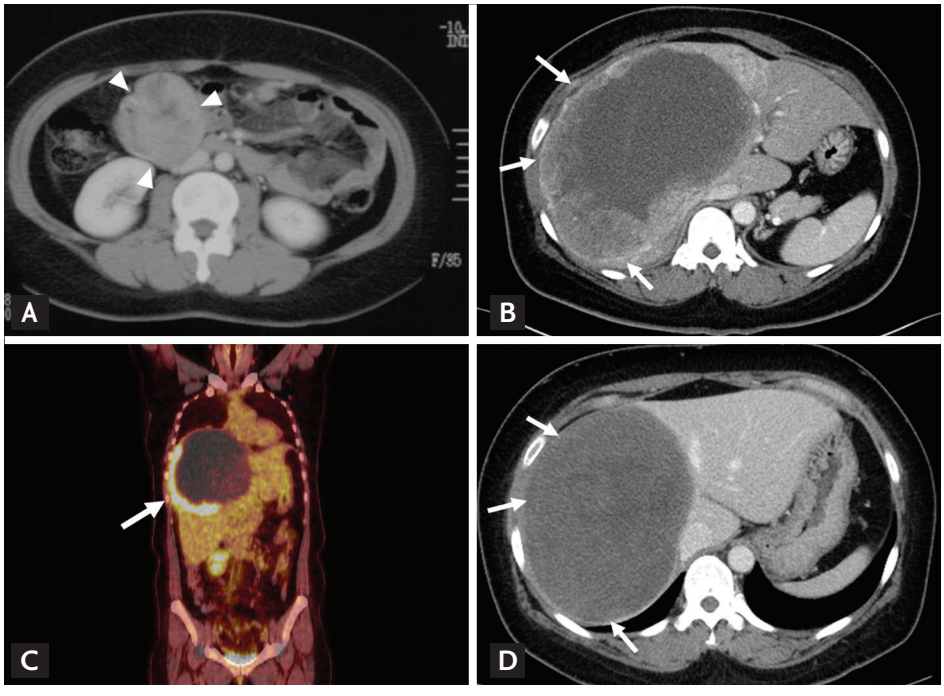

Figure 1. (A) Eleven years ago, a small intestinal gastrointestinal stromal tumor, 11 × 6 cm size, of the patient was resected (arrowheads). (B) Abdominal computed tomography (CT) showing a heterogeneous hepatic tumor with central necrosis, measuring 20 × 13 cm. Note peripheral rim of the tumor displaying heterogeneous enhancement, indicating viable tumor portion (arrows). (C) Positron emission tomography-CT showing two contrasting ^{18}F-fluorodeoxyglucose (FDG) uptake patterns of the tumor: the peripheral solid portion showing high metabolic rate (arrow, maximum standardized uptake value 8.2) and most of the inner portion showing FDG-void pattern, representing necrosis. (D) After 1 year of imatinib treatment, the tumor size reduced slightly to a size of 18 × 13 cm. Note the loss of peripheral enhancement of solid portion (arrows).

pISSN 1226-3303
eISSN 2005-6648
http://www.kjim.org

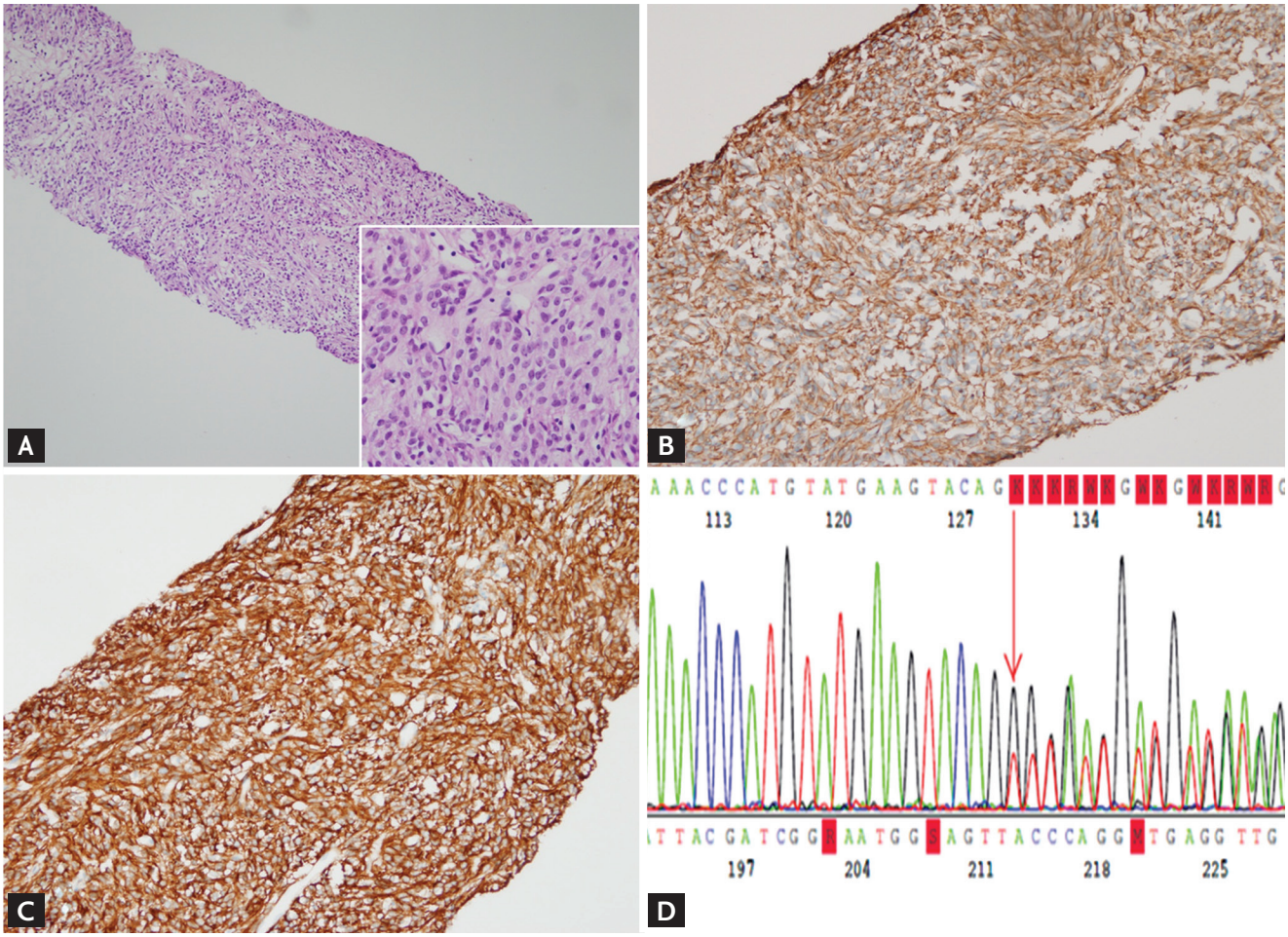

Figure 2. (A) Tumor biopsy revealing small round/spindle-shaped tumor cells (H&E, ×100; inset, ×200). (B, C) Immunohistochemical stainings showing vimentin reactivity (B, ×200), as well as CD117 reactivity (C, ×200). (D) C-kit sequencing displaying a deletion in exon 11.

sequencing, a deletion in exon 11 was identified. Based on the patient's history, positive staining for CD117, and c-kit mutation results, the neoplasm was diagnosed as a metastatic GIST in the liver (Fig. 2). The pros and cons of using imatinib were discussed, and the patient was started at a dose of 400 mg/day and the dose had been tapered to 200 mg/day. One year follow-up CT showed the hepatic tumor slightly diminished in size, but stabilized at a size of 18 × 13 cm (Fig. 1D).

GISTs in the small bowel tend to be more aggressive than those in the stomach. The liver is most common metastatic site. Although hepatic metastasis of a GIST is not uncommon, delayed metastasis over 5 years later is extremely rare. A few cases of inoperable liver metastatic GISTs have been reported, most were treated by a multidisciplinary approach including imatinib administration and subsequent portal vein embolization leading to tumor shrinkage which enables curative resection.

Conflict of interest

No potential conflict of interest relevant to this article was reported.

Acknowledgments

We grate Dr. Dae Jung Kim, Department of Radiology, CHA Bundang Medical Center, CHA University for providing a valuable CT picture of the patient (Fig. 1A).