EXTREMELY RAPID REGRESSION OF AORTIC INTRAMURAL HEMATOMA

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Aortic intramural hematoma (IMH) has been accurately diagnosed by modern imaging techniques and may follow various clinical courses. We report a case in which 2 episodes of aortic IMH occurred in different aortic segments within a 10-month period. In the first episode the IMH involving the descending thoracic aorta regressed in 1 month; however, the large IMH involving the ascending and transverse aorta rapidly regressed within 24 hours in the second episode. The patient has been treated medically and is doing well.

Clinical summary. The patient was a 62-year-old woman with a complicated history: removal of a pituitary adenoma in 1987, removal of the left kidney for renal cell carcinoma in 1992, and cerebral infarction in 1996. After removal of the pituitary adenoma she had been treated with hydrocortisone (30 mg/day) and desiccated thyroid (50 mg/day) for secondary adrenal hypofunction and hypothyroidism, respectively.

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The first episode of aortic IMH occurred on March 8, 1998. She came to the emergency department of Saka General Hospital with the sudden onset of severe back pain. An admission computed tomographic (CT) scan showed crescentic thickening of the posterior wall of the descending thoracic aorta and a left-sided hemothorax. An aortogram demonstrated no intimal flap and an opacified false lumen or ulcer-like projection. She was treated medically and discharged on May 4, 1998. The CT scans from the first episode are shown in Fig 1.

The second episode of aortic IMH occurred on January 12, 1999, during an operation for a subcutaneous and epidural abscess in the frontal region, possibly related to the previous pituitary operation. Her blood pressure suddenly fell below 50 mm Hg in systole. The emergency CT scan showed a large ascending and transverse aortic IMH and a massive left-sided hemothorax. Her general condition was stabilized until the next day, and she was referred to Sendai City Medical Center for emergency aortic repair. When another CT scan was taken, the aortic IMH had regressed completely. Since the maximal diameter of the ascending aorta was 40 mm, surgical intervention was canceled. Fluid was drained from the left pleural cavity (1170 mL; hemoglobin, 10.4 g/dL; hematocrit value, 36%), and she recovered after receiving medical treatment. The CT scans from the second episode are shown in Fig 2.

Discussion. Aortic IMH is a variant of aortic dissection recognized in 17%¹ to 23%² of the patients with acute aortic

Fig 1. *Left*, Admission CT scans with intravenous contrast medium in the first episode demonstrate a left-sided hemothorax adjacent to the crescent-shaped IMH (arrows) involving the descending thoracic aorta (3/8/98). *Right*, The crescentic thickness of the aortic wall is still present in the later CT scan (3/20/98).

Fig 2. *Left*, CT scans with intravenous contrast medium in the second episode of IMH involving the ascending and transverse aorta demonstrate a large IMH (arrows) around the ascending aorta and left-sided hemothorax (1/12/99). *Right*, Complete regression of the IMH is observed (1/13/99).

dissection. The natural history and prognosis of aortic IMH have not been widely studied, but it has been recommended that ascending aortic IMH should be treated surgically because of high mortality and morbidity associated with medical treatment. Although progression to a typical dissection, increased permeability of the aortic wall leading to a pleural and mediastinal hemorrhage, and an aortic rupture have been reported, the patients with descending thoracic aortic IMH could be treated with aggressive medical management. Harris and associates² reviewed the case histories of 53 patients with descending thoracic aortic IMH, of whom 33 had received medical treatment and 20 had undergone surgery with similar survival statistics on follow-up (91% and 80%, respectively). The results of aortic IMH are variable. Vilacosta and associates¹ reported on a patient with a huge ascending aortic IMH that regressed dramatically 36 hours later. In our case, the ascending and transverse aortic IMH regressed completely within 24 hours. Aortic IMH shows dynamic behavior, and thickened aortic walls tend to vary with time. The mechanism of extremely rapid regression of the IMH could not be elucidated.

Khan and Spiera³ reviewed 5 cases of aortic dissection in

which prolonged steroid therapy had been used for systemic lupus erythematosus, and Leonard and Hasleton⁴ reported 4 cases of hypothyroidism complicated by aortic dissection. The present patient had been treated with hydrocortisone and desiccated thyroid after pituitary surgery. This treatment might be one of the etiologic factors for aortic IMH.

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