

with a liposarcoma are symptomatic and that 15% have an asymptomatic liposarcoma discovered on a routine chest radiograph. Liposarcomas are usually large. The cases reported by Klimstra and associates³ ranged from 6 to 40 cm, with a mean weight of 1500 g. Enzinger and Weiss⁴ divided liposarcomas into the following 5 major morphologic subtypes: well differentiated, myxoid, round cell, dedifferentiated, and pleomorphic. Myxoid liposarcomas account for 40% to 50% of these tumors. Well-differentiated liposarcomas are a less-aggressive neoplasm and can produce metastases. Complete surgical excision is the preferred therapeutic choice. Recurrence can occur in a subtotal resection despite adjuvant therapy. The pseudoencapsulated lesions that can be completely removed have a better prognosis than the noncapsulated and less well-differentiated tumors; however, most primary chest wall soft tissue sarcomas (70%) are low grade. Local recurrence was reported in 33% of patients in the study by Greager and

colleagues.⁵ The presence of local recurrence has no significant effect on the overall survival.¹ Radiotherapy may be effective in the control of local recurrence, but its role is unclear.

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Cerebral malperfusion in acute type A dissection: Direct innominate artery cannulation

Genichi Sakaguchi, MD, PhD, Tatsuhiko Komiya, MD, Nobushige Tamura, MD, PhD, Shogo Obata, MD, Shinji Masuyama, MD, Chieri Kimura, MD, and Taira Kobayashi, MD, Okayama, Japan

Brain ischemia caused by malperfusion of major arch vessels in acute type A dissection is associated with a significantly higher risk of mortality. This report describes an urgent introduction of the selective cerebral perfusion immediately after establishment of cardiopulmonary bypass followed by total arch replacement in a case of acute type A dissection complicated with preoperative cerebral ischemia.

Clinical Summary

A 56-year-old man was transferred to our hospital after presenting with an abrupt loss of consciousness. At the time of admission, the patient was lethargic, although easily arousable, and responded to his name being called. His consciousness

level was assessed at 14 on the Glasgow Coma Scale. His initial brain computed tomographic (CT)

scan disclosed neither acute hemorrhage nor obvious ischemic changes. According to the neurologic status and CT findings, it was speculated that he did not have a cerebral infarction, despite the right-sided hemispheric hypoperfusion.

Duplex ultrasonography showed compression of the true lumen by the false lumen in the right carotid artery (Figure 1). A contrast-enhanced CT scan revealed a type A dissection extending from the sinotubular junction down to the bilateral common iliac arteries.

An emergency operation was performed 2 hours after admission. Near-infrared optical spectrophotometer probes were attached to the bilateral forehead of the patient to monitor regional cerebral oxygenation (rSO_2) throughout the operation (Figure 2). rSO_2 in the right side of the forehead was 21%, and that in the left side of the forehead was 50%.

After cardiopulmonary bypass was established with the right femoral artery used for inflow and the superior and inferior venae cavae for drainage, rSO_2 was still at a critically low level on the right side. The innominate artery was crossclamped proximally and transected. A 14F perfusion catheter was inserted in the true



Komiya, Tamura, Masuyama, Kimura, Kobayashi, Obata, Sakaguchi (left to right)

From the Department of Cardiovascular Surgery, Kurashiki Central Hospital, Okayama, Japan.

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Address for reprints: Genichi Sakaguchi, MD, Department of Cardiovascular Surgery, Kurashiki Central Hospital, Miwa, Kurashiki City, Okayama, 710-8602, Japan (E-mail: gs8722@kchnet.or.jp).

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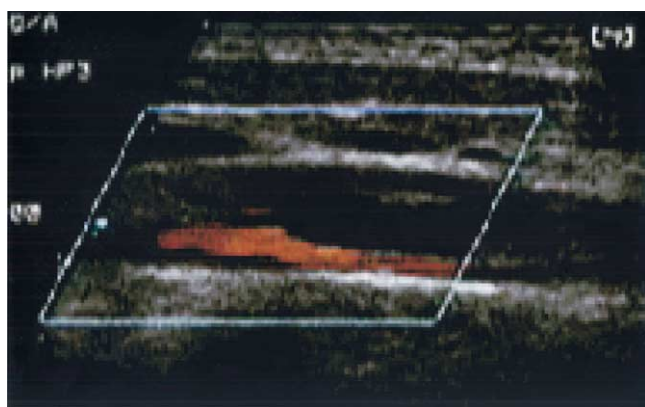


Figure 1. Duplex carotid echocardiogram showing compression of the true lumen by the false lumen in the right carotid artery.

lumen of the innominate artery, and partial selective cerebral perfusion was started. The rSO_2 in the right side of the forehead immediately recovered to the level of the left side (50%). The patient was cooled (25°C), and the systemic perfusion through the femoral artery was discontinued. An intimal tear was identified in the aortic arch. Perfusion catheters were inserted in the left common carotid artery and the left subclavian artery for total cerebral perfusion. The total arch was replaced with a tube graft with 4 limbs, and selective cerebral perfusion was terminated. The patient was discharged on postoperative day 19 without any neurologic deficits.

Discussion

Preoperative neurologic deficit is highly associated with operative mortality in surgical treatment for acute type A dissection.¹ Fann and colleagues² reported that arch vessel occlusion caused stroke in 5.5% of patients with acute type A dissection. The right carotid artery is most commonly involved, and this often occurs in conjunction with innominate artery dissection.² In our case the preoperative cerebral malperfusion resulted from extension of the dissection into the right carotid artery with compression of the true lumen. The axillary artery has been proposed as an inflow of cardiopulmonary bypass in the operation for acute type A dissection to avoid malperfusion instead of the femoral artery³; however,

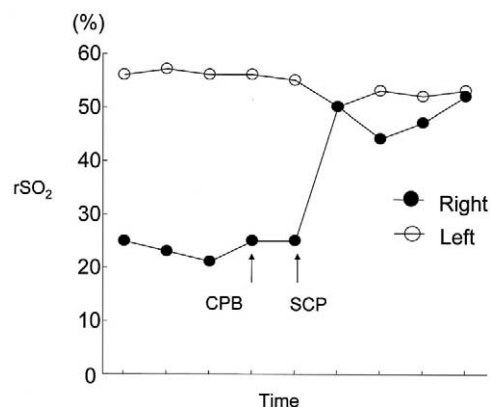


Figure 2. Changes in rSO_2 during the procedure. *CPB*, Cardiopulmonary bypass; *SCP*, selective cerebral perfusion.

the direct innominate artery cannulation is a less time-consuming (easy) and reliable method to restore cerebral perfusion in such a case with cerebral malperfusion. Fukada and coworkers⁴ reported an intraoperative cerebral malperfusion caused by retrograde femoral perfusion that had been successfully treated in the same method.

Because it was speculated that the patient did not have cerebral infarction, despite the right-sided hemispheric hypoperfusion in this case, the more rapid restoration of cerebral perfusion was expected to result in less cerebral damage.

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