Introduction

Isolated spontaneous dissection of the splanchnic arteries is rare. Among these disorders, dissection of the celiac artery (DCA) is especially rare. Obon-Dent reported that only 33 reported cases of DCA were yielded by a Medline database search in 2012. The patients were treated by surgery, endovascular intervention and medical management in these reports, but the therapeutic strategy is still unclear and controversial.

We report two cases of DCA, in which the patients were treated conservatively and observed carefully.
Spontaneous Dissection of Celiac Artery

Because his back pain did not resolve, he attended a general hospital, and was transferred by ambulance to the emergency unit of our hospital. Enhanced CT showed a nonenhanced region circumferentially surrounding the celiac artery. CRP and fibrinogen were elevated to 7.0 mg/dL and 642 mg/dL, respectively, but blood cell counts, D-dimer and fibrin/fibrinogen degradation products were within normal limits. He was hospitalized with a diagnosis of DCA, and received antihypertensive and analgesic treatment with intravenous injection of nicardipine hydrochloride and pentazocine. Systolic blood pressure was controlled at 100 to 120 mmHg according to treatment for the acute phase of aortic dissection. He did not receive antiplatelet or anticoagulant therapy. His back pain did not resolve, he attended a general hospital, and was transferred by ambulance to the emergency unit of our hospital. Enhanced CT showed a nonenhanced region circumferentially surrounding the celiac artery. CRP and fibrinogen were elevated to 7.0 mg/dL and 642 mg/dL, respectively, but blood cell counts, D-dimer and fibrin/fibrinogen degradation products were within normal limits. He was hospitalized with a diagnosis of DCA, and received antihypertensive and analgesic treatment with intravenous injection of nicardipine hydrochloride and pentazocine. Systolic blood pressure was controlled at 100 to 120 mmHg according to treatment for the acute phase of aortic dissection. He did not receive antiplatelet or anticoagulant therapy.

He was followed-up with enhanced CT at 1, 3, 5 and 30 months after the first examination, but no remarkable change was found at any time and both lumens remained patent (Fig. 2). He was well under treatment with an angiotensin receptor blocker and cholesterol transport inhibitor for hypertension and dyslipidemia 3.5 years after detection of the dissection.

Case 2
A 43-year-old male non-smoker with a history of hypertension presented to our hospital with severe back pain. He suddenly developed severe back pain and vomited 4 days earlier, and a physician prescribed an analgesic under the diagnosis of acute enteritis.

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from Japan, in the literature yielded by a Medline database search in 2012, whereas Suzuki found 18 cases in the Japanese literature in the same year. 4) The reason why many DCA cases were reported from Japan may be the high adoption rate of CT scanners in Japan, where the number of CT scanners per population is almost seven times the average in OECD countries. 5)

Possible serious sequelae of visceral artery dissection are rupture and organ ischemia. DCA can cause infarction in the spleen when it reaches the splenic artery. However, DCA is less frequently associated with fatal organ ischemia than is SMA dissection because of the abundant blood supply from the SMA even with occlusion of the celiac trunk, 6) and most ruptures of DCA arise in peripheral branches of the celiac artery. 2,7) Therefore, DCA would hardly cause any fatal sequel when the dissection is limited to the celiac trunk in the acute or early phase. However, celiac arterial stenosis or occlusion can bring on true pancreaticoduodenal aneurysms, 7) rupture of which is associated with mortality upwards of 50%.

Because DCA is extremely rare, optimal management has not yet been established. DCA was sometimes treated by surgery 8) or endovascular intervention 9) because of uncontrolled severe pain, intraabdominal hemorrhage, organ ischemia or large aneurysm formation, whereas many cases of DCA were able to be treated conservatively under close medical surveillance and became asymptomatic after the acute phase. 10)

The patient was doing well under circumspect medical management, and enhanced CT demonstrated no progression of the dissection 3 months after onset.

**Discussion**

DCA was first reported by Watson 2) in 1956, while spontaneous dissection of the superior mesenteric artery (SMA) was reported by Bauersfeld 3) in 1947. In both cases, the diagnosis was made by postmortem examination. The reason why DCA was recognized nearly a decade later than was dissection of the SMA appears to be its relative infrequency and non-fatal nature. Obon-Dent speculated that the recent increase in reports of DCA was attributable to the introduction of multislice CT angiography for the diagnosis of abdominal pain. 1) He reviewed only 33 cases of isolated DCA, including 10 cases
Although anticoagulation and/or antiplatelet drug therapy is often used in visceral artery dissection for prevention of arterial occlusion, it is speculated to be unnecessary in most DCA cases, because acute occlusion of the celiac trunk is well tolerated owing to the rich blood supply from the SMA. Strict control of blood pressure and careful surveillance are necessary both in the acute and chronic periods to prevent progression of dissection and various complications.

Conclusion

We describe two cases of isolated spontaneous dissection of the celiac artery (DCA) where the patients were successfully managed by conservative therapy with antihypertensive agents, and neither sequela nor progression of dissection was observed both in the acute and follow-up period. DCA is extremely rare, but recently the number of reports of DCA has risen due to increasing opportunities for CT angiography for the diagnosis of abdominal pain. Although optimal management for DCA has not yet been established, conservative treatment with strict control of blood pressure and careful surveillance is considered to be applicable in most cases of DCA.

Disclosure Statement

All authors declare no conflict of interest.

References