A very rare complication of coronary angiography: Acute mesenteric ischemia

Sir,
Coronary angiography is a routine procedure with low complication rates. Arterial thrombosis and arterial embolization are rare complications (0.06-1.19%), and most complications occur within the first 24 h after procedure. Acute mesenteric ischemia resulting from arterial embolization, and arterial thrombosis as a complication of coronary angiography are also very rare.

We treated a 63-year-old man with acute mesenteric ischemia, which occurred most probably during the coronary angiography, who was misdiagnosed as acute pancreatitis and transferred to our institution on the 5th day. He underwent emergency surgery with extended resection of small bowel, and right hemicolecotomy. He survived and created moderate symptoms of short bowel syndrome, which was managed successfully with oral elementary diet supplements.

Acute occlusion of the superior mesenteric artery may be the result of cardioarterial embolus or in situ thrombosis. Because of the viable 60 cm segment of
proximal jejunum at laparotomy, a distal occlusion of the superior mesenteric artery was thought rather than a proximal occlusion of superior mesenteric artery, which typically occurs at the vessel origin and should affect the entire length of small bowel except the proximal 10-12 cm segment of jejunum. No cardiac thrombus could be demonstrated on the coronary angiography images of our patient. Acute arterial thrombosis also may occur after diagnostic and therapeutic intra-arterial procedures, such as cardiac catheterization and peripheral vascular arteriography. An intimal flap can be created by the catheter even with the most careful technique, resulting in thrombosis of the vessel. The emergent nature of the patient evaluation did not allow a detailed interpretation of the aorta, which could have provided knowledge about the potential sources of the embolism, such as severe atherosclerosis.

Looking at the interval of events in our patient, the relationship between coronary angiography and mesenteric ischemia is very suggestive though not proven. Due to the acute onset of severe abdominal pain just during the angiography session and gradually increasing symptoms of the patient after it, we speculate that the mesenteric occlusion occurred during the coronary angiography session. Overlooking the real pathology minimized the chance for an early diagnosis and treatment such as embolectomy or endoluminal procedure, which might be performed just during the angiography session.[6]

Woorst et al[3] reported a similar case, which was cured by combined emergency operation with embolectomy of superior mesenteric artery and coronary artery bypass grafting. There is no clear data in the literature about on-table recognized occlusive complications during routine angiography.

The performer of coronary angiography has always to be aware of an acute mesenteric ischemia as a complication. Sudden abdominal pain during the procedure might be the most valuable warning to rule out a mesenteric arterial occlusion with aortography. Without doubt, it is the angiography diagnostic gold standard for mesenteric vasculature, and the only chance for the patient to survive is an early diagnosis. That’s why we felt the necessity to inform about a case due to a routine diagnostic procedure performed frequently in many institutions worldwide.

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REFERENCES