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IMAGES IN INTERVENTION

Extravasation From an Accessory Renal Artery

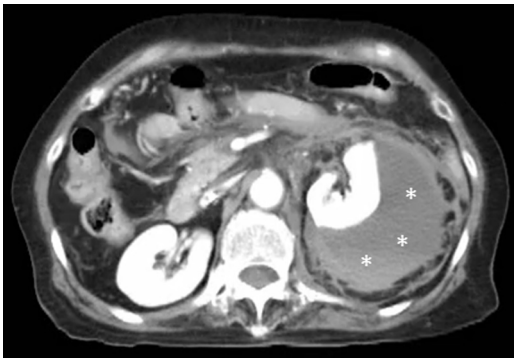
A Critical Complication Associated With Percutaneous Coronary Intervention

Nobuaki Kobayashi, MD,* Noritake Hata, MD,* Tomoyuki Kuwako, MD,† Wataru Shimizu, MD‡

A 72-year-old woman was admitted with acute anterior ST-segment elevation myocardial infarction and underwent emergency primary percutaneous coronary intervention (PCI) at the midportion of the left anterior descending coronary artery. After the procedure, she suffered from shock and severe abdominal pain. Enhanced computed tomography showed marked perirenal hematoma (**Figure 1**). An aortogram revealed that the left kidney was supplied by double renal arteries and that an accessory renal artery originated from the L3-L4 intervertebral disk level and travelled in parallel with the aorta (**Figure 2A**, Online Video 1). Furthermore, a selective injection demonstrated that the extravasation occurred from the left accessory renal artery (**Figures 2B and 2C**, Online Video 2). Transcatheter embolization with Gelfoam (Pfizer, Tokyo, Japan) was performed, and final angiograms showed complete embolization of the left accessory renal artery in the absence of extravasation (**Figures 3A to 3C**, Online Videos 3 and 4).

In the present case, it was suspected that the extravasation was caused during the primary PCI when a 0.035-inch guidewire was used to advance a guiding catheter. Guidewire penetration into the left accessory renal artery went undetected because the accessory renal artery originated from a lower level and traveled in parallel with the aorta. Renal artery variations are common; in a previous report, the frequency of a left accessory renal artery was found to be 13% (1). However, the frequency of left accessory renal arteries originating from regions lower than lumbar spine L3 has been reported to be only 6% of all left accessory renal arteries (1).

FIGURE 1 Enhanced Abdominal Computed Tomography



Computed tomography showed marked left perirenal hematoma **(asterisks)**.

REPRINT REQUESTS AND CORRESPONDENCE: Dr. Nobuaki Kobayashi, Intensive Care Unit, Chiba Hokusoh Hospital, 1715 Kamagari, Inzai, Chiba 270-1694, Japan. E-mail: s5047@nms.ac.jp.

From the *Division of Intensive Care Unit, Nippon Medical School Chiba Hokusoh Hospital, Chiba, Japan; †Department of Radiology, Nippon Medical School, Tokyo, Japan; and the ‡Department of Cardiovascular Medicine, Nippon Medical School, Tokyo, Japan. The authors have reported that they have no relationships relevant to the contents of this paper to disclose.

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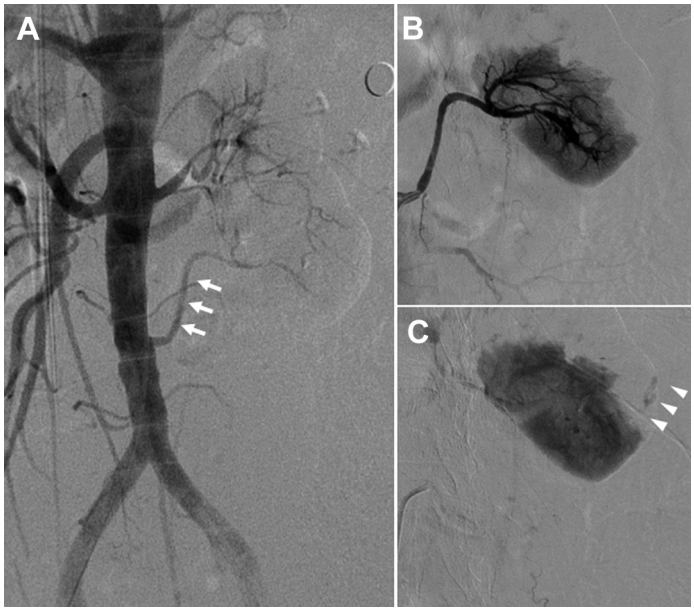
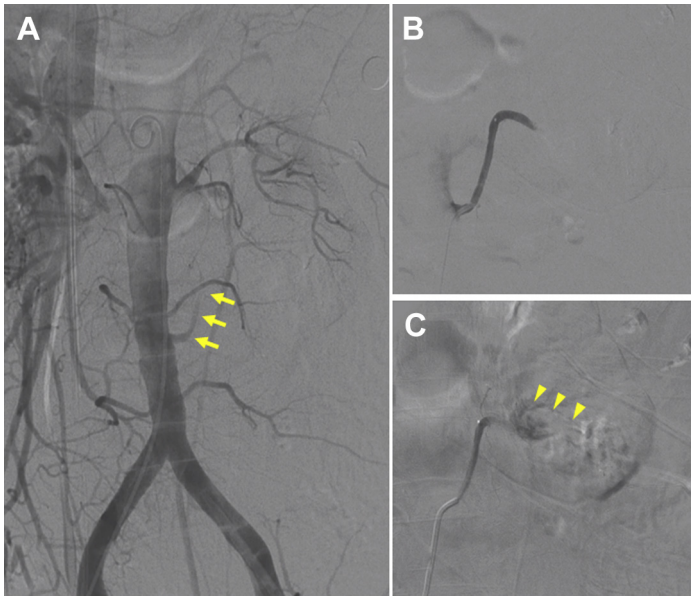
FIGURE 2 Initial Angiograms of Abdominal Arteries



(A) An abdominal aortogram. The left kidney is supplied with double renal arteries. **White arrows** show the left accessory renal artery originating from the L3-L4 intervertebral disk level and traveling in parallel with the aorta (Online Video 1). Early- **(B)** and late **(C)**-phase selective left accessory renal arteriograms (Online Video 2). **White arrowheads** show extravasation from the left accessory renal artery.

FIGURE 3 Post-Transcatheter Embolization Angiograms for Abdominal Arteries



An abdominal aortogram **(A)** (Online Video 3) and early- **(B)** and late **(C)**-phase selective left accessory renal arteriograms (Online Video 4). **Yellow arrows** show the complete embolization of the accessory renal artery. Extravasation is not observed **(yellow arrowheads)**.

REFERENCE

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KEY WORDS accessory renal artery, bleeding complication, perirenal hematoma

APPENDIX For supplemental videos, please see the online version of this article.