

Encountering the Accessory Polar Renal Artery during retroperitoneal lymphadenectomy.

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Abstract

The kidneys are normally blooded from renal artery that anatomically originates from the abdominal aorta. However, there are accessory polar artery variations. Incidence varies ranges from 11.3% to 59.5% depending on ethnicity. We also wanted to show two different cases of accessory polar renal artery (APRA).

Introduction

The kidneys are normally blooded from renal artery that anatomically originates from the abdominal aorta. However, there are accessory polar artery variations (1,2). Incidence varies ranges from 11.3% to 59.5% depending on ethnicity (3,4). In a cadaver dissection study, the incidence of accessory polar renal artery in women and men was not different; in the same study, it was found that the variation of polar artery was more often in the right kidney than in the left kidney (5). We also wanted to show two different cases of accessory polar renal artery (APRA) that we operated for endometrial cancer and detected during paraaortic lymph node dissection.

Cases Presentation:

A 53 years old woman, body mass index of 27.2, gravida 1, parity 1, and had a previous cesarean section. Patient applied to our clinic for postmenopausal bleeding. Endometrial sampling result was endometrioid type endometrium cancer, histologic grade 2, and nuclear grade 3.

Preoperative MR imaging, it was reported that myometrial invasion was more than 1/2 and there was a 3,5cm tumor in the uterine cavity. The patient underwent laparotomy, hysterectomy, bilateral salpingo-ooforectomy, infracolic omentectomy, bilateral pelvic-paraaortic lymph node dissection. During the paraortic lymph node dissection, APRA was detected from bifurcation of abdominal aorta, beginning of the right common iliac artery to right kidney (Figure 1). The operation is completed without any vascular complications.

The other case is, a 59 years old woman, body mass index of 30, gravida 1, parity 1, and she had not previous operation. She applied to the clinic for postmenopausal bleeding. Transvaginal ultrasonography showed a hematometra of 10 cm in the uterine cavity. Endometrial sampling result was endometrioid type endometrium cancer, histologic grade 1, nuclear grade 2. Preoperative MR imaging, it was reported that myometrial invasion was more than 1/2. The patient underwent laparotomy, hysterectomy, bilateral salpingo-ooforectomy, infracolic omentectomy, bilateral pelvic-paraaortic lymph node dissection. During the paraortic lymph node dissection, the left APRA was observed approximately 1.5 cm above the inferior mesenteric artery. The operation is completed without any complications.

Discussion:

Because of the APRA is functional, it is extremely important to be careful with vascular injuries, to prevent ischemic damage and not to cause kidney failure complications (6). In addition, cases of reno-vascular hypertension due to polar artery injury have been reported in the literature (7). Any vascular anomalies were reported in the preoperative imaging tests performed in both cases. For this reason, it is very important that gynecologist oncologists surgical experience and know the retroperitoneal vascular anatomy well, because of the possibility of encountering vascular variations.

Conflict of Interest: None declared.

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Figure Legends:

Figure 1: APRA was detected from bifurcation of abdominal aorta, beginning of the right common iliac artery to right kidney

Figure 2: APRA was observed approximately 1.5 cm above the inferior mesenteric artery.



