Conference Abstract

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Bilateral accessory renal artery: A case report

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Background: Accessory renal arteries (ARAs) are embryonic remnants found in >1/3 rd of patients and occur bilaterally in 10% of the population. Renal arterial variations are extensive and are found because of its complex embryological development. In 1552, Eustachius was the first to write about multiple renal arteries. Variation in renal arterial system has significant clinical implications in endoscopic surgery, renal angiography and renal vascular interventions such as renal transplantation.

Aim and objectives: To study the vascularity of both kidneys in the present case and its embryological and clinical significance.

Materials and methods: In the routine cadaveric dissection of a female cadaver in the department of Anatomy, Dr. B.R.Ambedkar Medical College incidentally showed accessory renal arteries on both the sides. Accessory renal artery length and the level of origin was measured and compared. The hilum of both the kidneys were cleared of perinephric fat and branching pattern of both renal arteries were studied.

Results: Renal arterial system showed considerable variations bilaterally, the right kidney was found to have two renal arteries, one entering the hilum measuring 8.9 cm and the other entering the lower pole, measuring 8.2 cm. The left kidney was found to have three renal arteries, two entering the hilum measuring 7.2 cm and 7.4 cm and a third one entering the upper pole, measuring 6.9 cm. The renal arterial system on both sides arises at the L2 and L3 level.

Conclusion: Knowledge of the variations in renal vessels is essential for exploring renal trauma, vascular reconstruction procedures, repair of abdominal aortic aneurysms etc.

Keywords: Aneurysms, Cadaver, Eustachius