

An Anomalous Pelvic Branch from Obturator Artery: A Case Report

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Abstract: Original variations of obturator artery are reported in the previous literature but anomalous branching pattern of obturator artery in the pelvic cavity is not reported in particular. During routine dissection for the medical undergraduates at ESIC Medical College & PGIMSR, Chennai, INDIA, we observed anomalous pelvic branch arising from the obturator artery unilaterally on the right side of a female cadaver. Anomalous branch arising from the obturator artery in the pelvis unilaterally and terminating at the pelvic brim observed in our report is very important because its termination at pelvic brim may cause serious complications during femoral ring surgical procedures. Supported literature is not available on the anomalous branching pattern from the obturator artery in the pelvic cavity.

Keywords: Anomalous, Obturator artery, Pelvic branch.

INTRODUCTION

The internal iliac artery divides into anterior and posterior divisions [1, 2]. On each side, the anterior division gives rise to the superior vesical artery, inferior vesical artery, middle rectal artery, vaginal artery, obturator artery, internal pudendal artery and the inferior gluteal artery. The posterior division of the internal iliac artery give rise to iliolumbar artery, lateral sacral artery and the superior gluteal arteries [2]. Obturator artery inclines antero-inferiorly on the lateral pelvic wall and leaves the pelvic cavity by passing through the obturator foramen before entering the foramen it may give off an iliac branch, pubic branch and a vesical branch [3].

CASE REPORT

During routine dissections for the medical undergraduates at ESIC Medical College & PGIMSR, Chennai, INDIA, we observed anomalous pelvic branch arising from the obturator artery unilaterally on the right side of a female cadaver. We have observed a large branch arising from the obturator artery terminating at the pelvic brim (Fig. 1). We considered this branch as anomalous branch arising from the obturator artery. We have not observed the ilial, pubic and vesical branches arising from the obturator artery in the pelvis either unilateral or bilateral.



Fig. 1: Anomalous branch arising from the obturator artery in the pelvis unilaterally and terminating at the pelvic brim (OA: obturator artery; ON: obturator nerve; OV: obturator vein; ARROW: Anomalous branch)

DISCUSSION

Obturator artery may give off iliac, pubic, and vesical branches in the pelvic cavity later accompanies with vein and nerve then enters the obturator canal [2]. Variations in the origin of obturator artery are common [4, 5]. Obturator artery originated from common iliac or anterior division of internal iliac artery in 41.4% of cases, from inferior epigastric artery in 25% of cases, from superior gluteal artery in 10% of cases, from inferior gluteal or internal pudendal arteries in 10% of cases and from external iliac artery in 1.1% of cases was reported in the previous literatures [6-8]. Standard books stated, the obturator artery may give off an iliac branch, pubic branch and a vesical branch in the pelvic cavity. Iliac branch to the iliac fossa which supplies the bone and iliacus and anastomoses with the iliolumbar artery. Vesical branch runs medially to the bladder and sometimes replaces the inferior vesical branch of the internal iliac artery. Pubic branch usually arises just before the obturator artery leaves the pelvis and ascends over the pubis to anastomose with the contra-lateral artery and the pubic branch of the inferior epigastric artery [1, 5, 9]. Anomalous branch arising from the obturator artery in the pelvis unilaterally and terminating at the pelvic brim observed in our report. Anomalous branch from obturator artery being reported here is very important as it terminates at pelvic brim which may cause serious complications during femoral ring surgical procedures [10]. Supported literature is not available on the anomalous branching pattern from the obturator artery in the pelvic cavity.

CONCLUSION

Literatures reported about the different type and sources of origin of obturator artery but not the anomalous branching pattern of artery in the pelvic cavity. Our report gives basic knowledge to clinicians about anomalous branching pattern of obturator artery within the pelvic cavity.

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