

The accessory fallopian tube, a rare Mullerian duct anomaly: Two case reports

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Abstract

Two cases of accessory fallopian tubes are described, which did not compromise fertilisation and were asymptomatic; the condition is rather rare. Both the cases were discovered during Caesarean sections; the first case featured accessory fallopian tubes attached to both the main tubes, while in the second case, two accessory tubes were attached to the right main tube. The fallopian tube is where fertilisation takes place; the zygote then proceeds to the uterine cavity. An accessory fallopian tube is a rare congenital anomaly; the tube is usually attached to the ampullary region of a principal tube. Accessory tubes are usually asymptomatic, rarely causing infertility, pyosalpingitis, torsion, and ectopic pregnancies.

Keywords: Accessory fallopian tube, tubal duplication, fallopian tube, Mullerian duct anomaly.

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Introduction

The fallopian tube is approximately 10-12 cm in length and extends from the uterus to the ovaries, and is composed of four parts, namely, the intramural, isthmic, ampullary, and fimbrial regions.¹ After expulsion from the ovarian follicle, the ovum is captured by the fimbrial region and most fertilisation occurs in the ampullary region. The zygote, is transported via the tube ciliary and muscular activity to the uterine cavity, arriving on day five or six after fertilisation.²

During embryology, the uterus and the upper segment of the vagina develop after fusion of the paramesonephric (Mullerian) ducts. The fallopian tubes develop from the cranial ends of these ducts. A bifurcation in this region creates an accessory fallopian tube,³ which is a thin, non-patent tube structure, fimbriated on the free side, and usually attached to the ampullary region of a principal fallopian tube.⁴ This anatomical anomaly was first described in 1984.⁵ Although rare, the anomaly may cause infertility, pyosalpingitis, torsion, and ectopic pregnancy.^{4,6,7} We present two cases.

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Case 1

On 19/10/2019, a 31-year-old woman with 36 weeks pregnancy was admitted to Umraniye Training and Research Hospital, Department of Obstetrics and Gynaecology due to rupture of membranes. This was her second pregnancy; the first concluded via medical abortion because of intrauterine foetal exitus. She had developed pre-eclampsia in week 32 and was taking Methyldopa 250 mg three times daily. However, her blood pressure continued to climb, associated with epigastric pain and visual disturbance. Given the severe pre-eclampsia, she underwent an uncomplicated Caesarean section and was delivered of a 2.6 kg infant. During routine examination of the operation field and adnexa, hypoplastic accessory tubes attached to both the right and left main tubes were noted. Both accessory tubes arose from the ampullary regions of the principal fallopian tubes, and both exhibited small

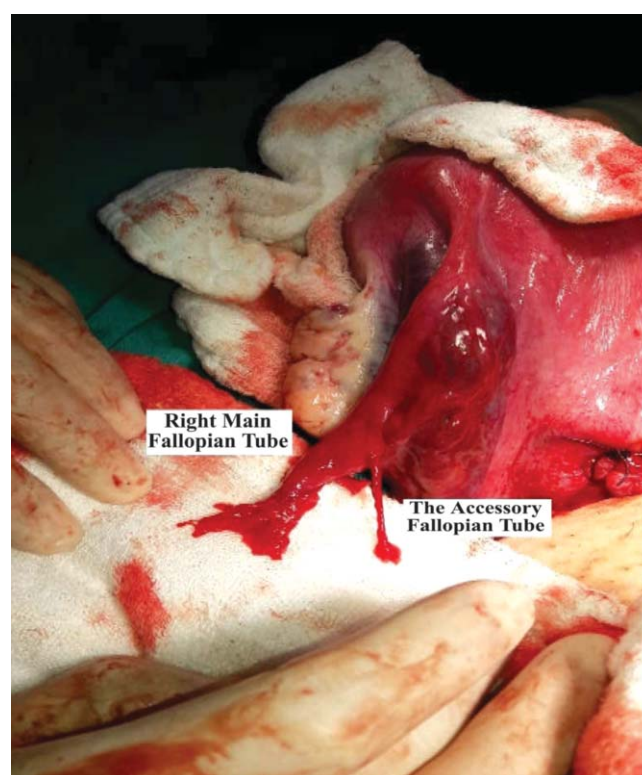


Figure-1: Image of right adnexa of the uterus (Case 1) taken during c section. The accessory tube was arising from the ampullary part of the right main fallopian tube.

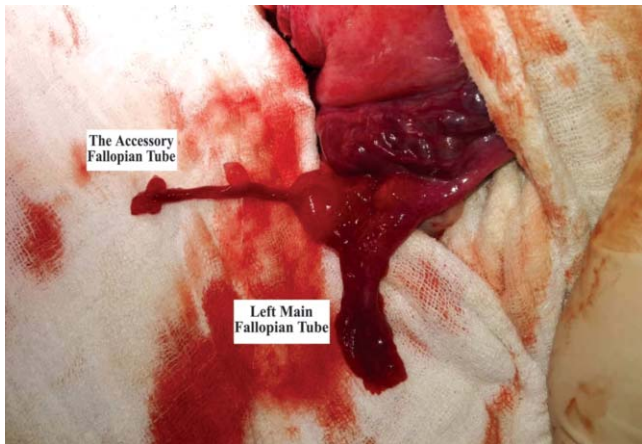


Figure-2: Image of left adnexa of the uterus (Case 1) taken during c section. The accessory tube was arising from the ampullary part of the left main fallopian tube.

fimbrial sections on their free sides (Figures-1, 2). The principal tubes were normal, extending from the uterus to the ovaries and exhibited normal fimbrial ends. The uterus and both ovaries were anatomically normal. The accessory tubes were removed to avoid future gynaecological complications. One day after the Caesarean section, urinary ultrasound revealed no renal anomaly.

Case 2

On 29/07/2019, a 41-year-old woman who was 38 weeks pregnant admitted with contractions to the Umraniye Training and Research Hospital, Department of Obstetrics and Gynaecology. During labour, the foetal heart rate decelerated after every spontaneous uterine

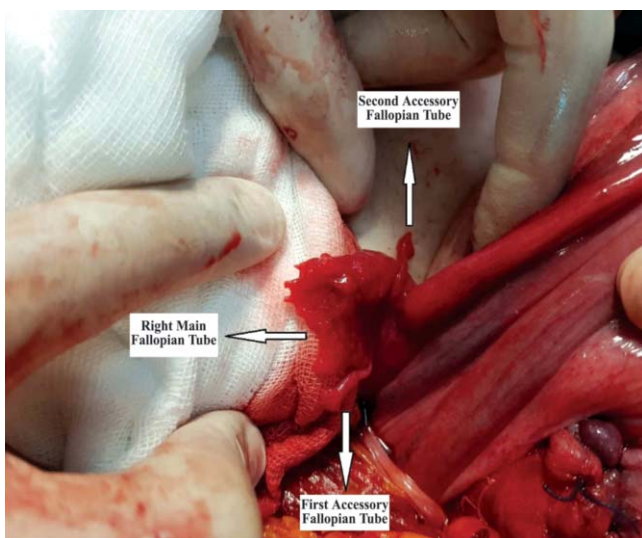


Figure-3: Image of right adnexa of the uterus (Case 2) taken during c section. As shown, right fallopian tube had two accessory tubes attached.

contraction. The patient underwent Caesarean section because of foetal distress, and was delivered of a 3,400-g infant with a 1-minute Apgar score of 4 and a 5-minute Apgar score of 7. Partial placental detachment was evident, but this was not considered to reflect any risk of complete detachment being, rather attributable to advanced maternal age. During routine examination of the operation field and adnexa, two hypoplastic accessory tubes arising from the ampullary region of the right main fallopian tube were noted; both exhibited small fimbrial regions on their free sides (Figure-3). The uterus, both ovaries, and the left main tube were anatomically normal. The patient and her husband requested bilateral tubal ligation; this was performed using the Pomeroy technique and the accessory tubes were removed to avoid further gynaecological complications. One day later, urinary ultrasound revealed no renal anomaly.

Discussion

An accessory fallopian tube (a rare mullerian duct anomaly) was first described in 1894;⁵ accessory fallopian tubes were later reported in infertile women.^{4,5} The true prevalence of such tubes remains unknown; the frequency ranged from 6 to 13% in older studies, but was 1.9% among infertile women in a recent study.^{8,9} It was suggested that accessory tubes might cause infertility or an ectopic pregnancy; the zygote might be seized by the fimbria of a non-patent accessory tube and not those of a main fallopian tube.¹⁰ Achievement of spontaneous conception after removal of an accessory fallopian tube supported this contention.¹⁰ However, both of our cases had achieved spontaneous pregnancies; they had no infertility issues. Neither case evidenced pyosalpingitis, torsion, or an ectopic pregnancy.^{4,6,7}

In conclusion, accessory tubes are often overlooked; they are both rare and (usually) asymptomatic. However, removal of such tubes (detected during laparoscopy, laparotomy, or Caesarean section) may reduce the risk of future gynaecological complications.

Informed Consent: Consent was obtained from both cases for publishing their reports.

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Conflict of Interest: None to declare

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