

1 **DOI: <https://doi.org/10.47391/JPMA.1277>**

2  
3 **The accessory fallopian tube, a rare Mullerian duct anomaly: two**  
4 **case report**

5  
6 **Ibrahim kale**

7 Department of Obstetrics and Gynecology, Umraniye Training and Research Hospital,  
8 Istanbul, Turkey

9 **Correspondence:** Ibrahim kale **Email:** dribakale@hotmail.com

10  
11 **Abstract**

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

22 **Key Words:** Accessory fallopian tube, tubal duplication, fallopian tube,  
23 Mullerian duct anomaly.

24  
25 **Introduction**

26 The fallopian tube is approximately 10-12 cm in length and extends from the  
27 uterus to the ovaries, and is composed of four parts, namely, the intramural,  
28 isthmic, ampullary, and fimbrial regions.<sup>(1)</sup> After expulsion from the ovarian

29 follicle, the ovum is captured by the fimbrial region and most fertilisation occurs  
30 in the ampullary region. The zygote, is transported via the tube ciliary and  
31 muscular activity to the uterine cavity, arriving on day five or six after  
32 fertilisation.<sup>(2)</sup>

33 During embryology, the uterus and the upper segment of the vagina develop  
34 after fusion of the paramesonephric (Mullerian) ducts. The fallopian tubes  
35 develop from the cranial ends of these ducts. A bifurcation in this region creates  
36 an accessory fallopian tube,<sup>(3)</sup> which is a thin, non-patent tube structure,  
37 fimbriated on the free side, and usually attached to the ampullary region of a  
38 principal fallopian tube.<sup>(4)</sup> This anatomical anomaly was first described in  
39 1984.<sup>(5)</sup> Although rare, the anomaly may cause infertility, pyosalpingitis, torsion,  
40 and ectopic pregnancy.<sup>(4, 6, 7)</sup> We present two cases.

41

#### 42 **Case 1**

43 On 19/10/2019, a 31 year old woman with 36 weeks pregnancy was admitted to  
44 Umraniye Training and Research Hospital, Department of Obstetrics and  
45 Gynaecology due to rupture of membranes. This was her second pregnancy; the  
46 first concluded via medical abortion because of intrauterine foetal exitus. She  
47 had developed pre-eclampsia in week 32 and was taking Methyldopa 250 mg  
48 three times daily. However, her blood pressure continued to climb, associated  
49 with epigastric pain and visual disturbance. Given the severe pre-eclampsia, she  
50 underwent an uncomplicated Caesarean section and was delivered of a 2.6 kg  
51 infant. During routine examination of the operation field and adnexa,  
52 hypoplastic accessory tubes attached to both the right and left main tubes were  
53 noted. Both accessory tubes arose from the ampullary regions of the principal  
54 fallopian tubes, and both exhibited small fimbrial sections on their free sides  
55 (Figures 1, 2). The principal tubes were normal, extending from the uterus to the  
56 ovaries and exhibited normal fimbrial ends. The uterus and both ovaries were  
57 anatomically normal. The accessory tubes were removed to avoid future

58 gynaecological complications. One day after the Caesarean section, urinary  
59 ultrasound revealed no renal anomaly.

60

## 61 **Case 2**

62 On 29/07/2019, a 41 year old woman who was 38 weeks pregnant admitted with  
63 contractions to the Umraniye Training and Research Hospital, Department of  
64 Obstetrics and Gynaecology. During labour, the foetal heart rate decelerated  
65 after every spontaneous uterine contraction. The patient underwent Caesarean  
66 section because of foetal distress, and was delivered of a 3,400-g infant with a 1-  
67 minute Apgar score of 4 and a 5-minute Apgar score of 7. Partial placental  
68 detachment was evident, but this was not considered to reflect any risk of  
69 complete detachment being, rather, attributable to advanced maternal age.  
70 During routine examination of the operation field and adnexa, two hypoplastic  
71 accessory tubes arising from the ampullary region of the right main fallopian  
72 tube were noted; both exhibited small fimbrial regions on their free sides (Figure  
73 3). The uterus, both ovaries, and the left main tube were anatomically normal.  
74 The patient and her husband requested bilateral tubal ligation; this was  
75 performed using the Pomeroy technique and the accessory tubes were removed  
76 to avoid further gynaecological complications. One day later, urinary ultrasound  
77 revealed no renal anomaly.

78

## 79 **Discussion**

80 An accessory fallopian tube (a rare mullerian duct anomaly) was first described  
81 in 1894;<sup>(5)</sup> accessory fallopian tubes were later reported in infertile women.<sup>(4, 5)</sup>  
82 The true prevalence of such tubes remains unknown; the frequency ranged from  
83 6 to 13% in older studies, but was 1.9% among infertile women in a recent  
84 study.<sup>(8, 9)</sup> It was suggested that accessory tubes might cause infertility or an  
85 ectopic pregnancy; the zygote might be seized by the fimbria of a non-patent  
86 accessory tube and not those of a main fallopian tube.<sup>(10)</sup> Achievement of

87 spontaneous conception after removal of an accessory fallopian tube supported  
88 this contention.<sup>(10)</sup> However, both of our cases had achieved spontaneous  
89 pregnancies; they had no infertility issues. Neither case evidenced  
90 pyosalpingitis, torsion, or an ectopic pregnancy.<sup>(4, 6, 7)</sup>

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

95

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

98 **Disclaimer:** None to declare

99 **Conflict of Interest:** None to declare

100 **Funding Disclosure:** None to declare

101

## 102 **References**

- 103 1. Eddy CA, Pauerstein CJ. Anatomy and physiology of the fallopian tube. Clin  
104 Obstet Gynecol. 1980;23(4):1177-93.
- 105 2. Pulkkinen MO. Oviductal function is critical for very early human life. Ann  
106 Med. 1995;27(3):307-10.
- 107 3. Skandalakis JE, FR, Weidman TA, Skandalakis LJ, Skandalakis PN et al. .  
108 Surgical anatomy: the embryologic and anatomic basis of modern surgery. :  
109 Nicosia, Cyprus: Broken Hill Publishers Ltd; 2007.
- 110 4. Coddington CC, Chandler PE, Smith GW. Accessory fallopian tube. A case  
111 report. J Reprod Med. 1990;35(4):420-1.
- 112 5. Rottenstreich M, Smorgick N, Pansky M, Vaknin Z. Isolated Torsion of  
113 Accessory Fallopian Tube in a Young Adolescent. J Pediatr Adolesc Gynecol.  
114 2016;29(4):e57-8.

- 115 6. Macnaughton-Jones H. Pyosalpinx in an Accessory Fallopian Tube. Proc R  
116 Soc Med. 1914;7(Obstet Gynaecol Sect):1-4.
- 117 7. Thonell SH, Kam A, Resnick G. Torsion of accessory fallopian tube:  
118 ultrasound findings in two premenarchal girls. Australas Radiol.  
119 1993;37(4):393-5.
- 120 8. Yablonski M, Sarge T, Wild RA. Subtle variations in tubal anatomy in  
121 infertile women. Fertil Steril. 1990;54(3):455-8.
- 122 9. Zheng X, Han H, Guan J. Clinical features of fallopian tube accessory ostium  
123 and outcomes after laparoscopic treatment. Int J Gynaecol Obstet.  
124 2015;129(3):260-3.
- 125 10. Gandhi KR, Siddiqui AU, Wabale RN, Daimi SR. The accessory fallopian  
126 tube: A rare anomaly. J Hum Reprod Sci. 2012;5(3):293-4.

127

128

129

130

131

132

133

134

135

136

137

138

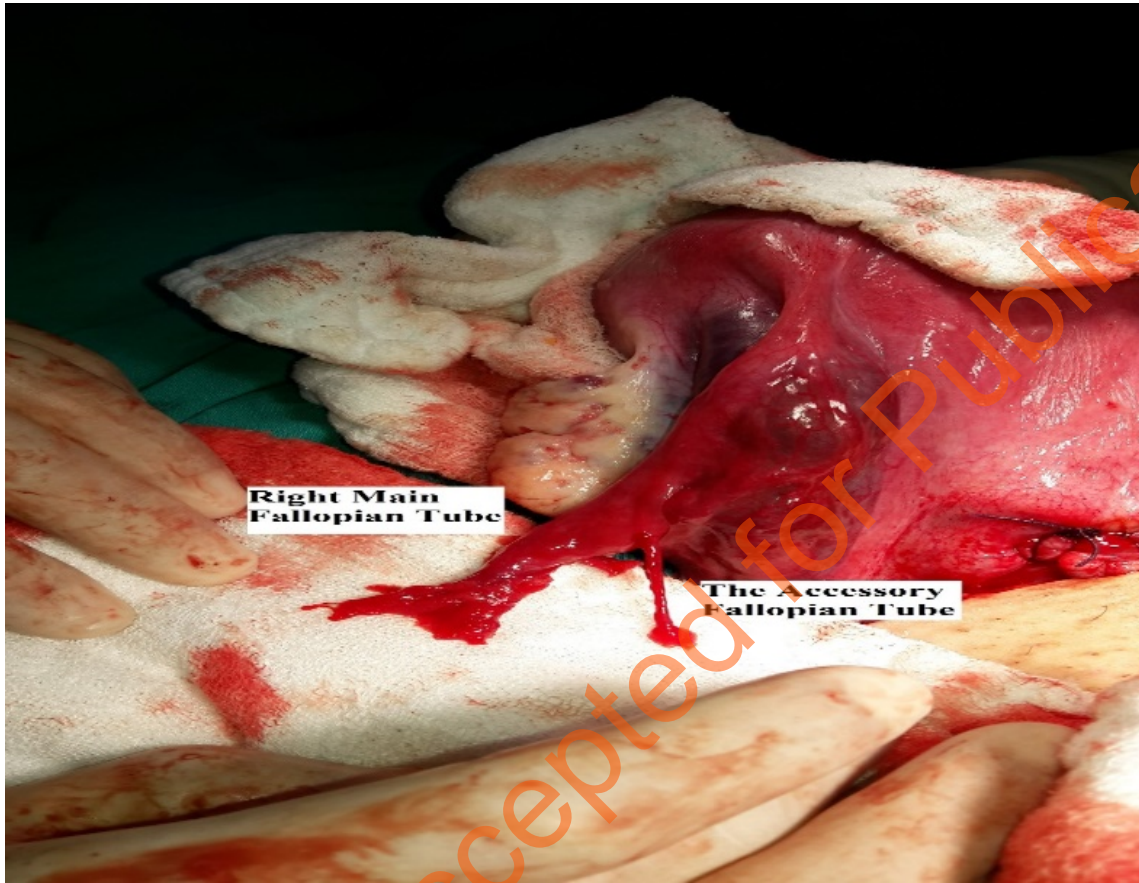
139

140

141

142

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



145

146

147

148

149

150

151

152

153

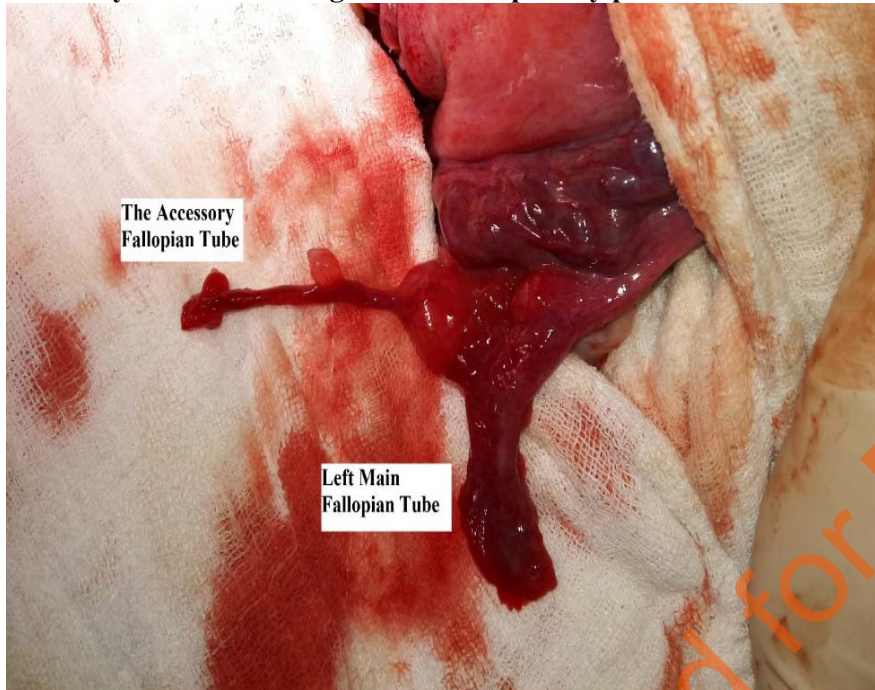
154

155

156



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



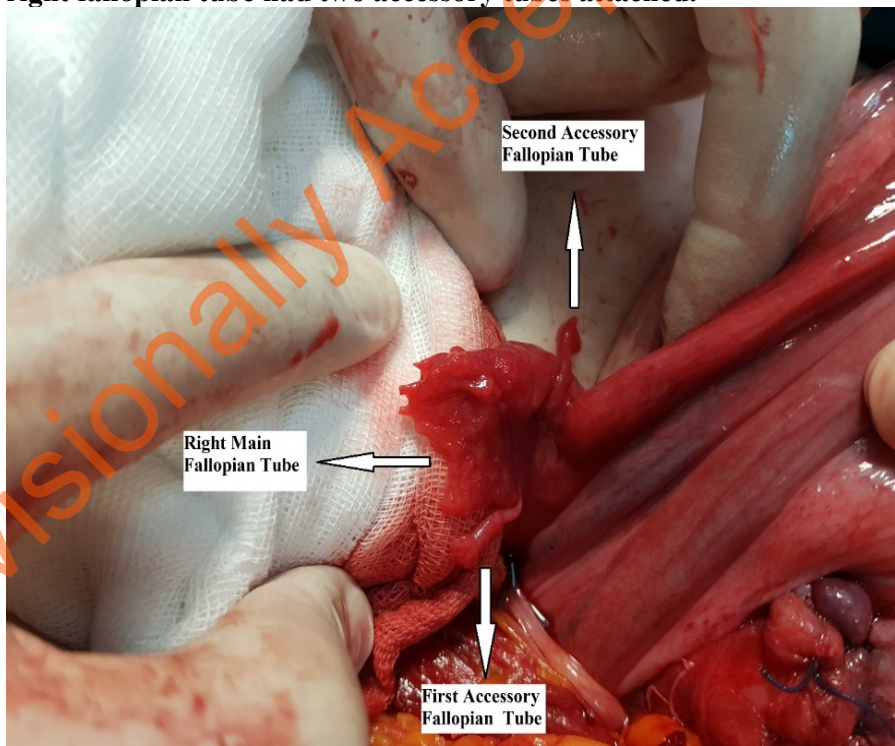
159

160

161

162

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



165

166