



# Ectopic appendix vermiformis located in the right deep gluteal region due to unilateral piriformis agenesis

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## Abstract

Incidental CT findings of a 67 years old female patient that had right piriformis agenesis and migration of appendix vermiformis to the right deep gluteal region is presented. To our knowledge this is the first case that the appendix has such ectopic location. Consideration of such variation would be beneficial to avoid possible complications, especially for surgeons who deal with gluteal region.

**Keywords** Ectopic appendix · Piriformis agenesis · Variation · Deep gluteal region

## Introduction

Incidental CT findings of a 67 years old female patient that had right piriformis agenesis and migration of appendix vermiformis to the right deep gluteal region is presented. To our knowledge this is the first case that the appendix has such ectopic location.

## Case

A 67 year old female patient admitted to our emergency department with left flank pain. She had no previous surgery, and her physical examination and laboratory findings were normal. Abdominal CT examination was performed to exclude urinary stone disease, with a 64 row device (Siemens Somatom Definition, Erlangen, Germany), without intravenous contrast administration. The CT exam revealed right piriformis absence, while left one was normal. Moreover, the appendix vermiformis was located in the right deep gluteal region, passing through the greater sciatic foramen (Figs. 1, 2). There was no wall thickening or any other inflammation sign at the appendix. There was not any

additional finding on the CT exam. Patient's pain relieved with analgesics, and she was discharged from the hospital.

## Discussion

Piriformis muscle is the main structure that fills the greater sciatic foramen and it forms the posterolateral wall of true pelvis. Variations regarding this muscle include division into two parts, subdivision into several fascicles, fusion with gluteus medius, gluteus minimus, superior gemellus or rarely obturator internus muscle [1]. Together with sciatic nerve division variations, these are related with development of piriformis syndrome [3]. Absence of piriformis has also been described, but only in old anatomical literature [1], however, we have not been able to find any knowledge about its prevalence. On the other hand, variations of the appendix are rare and include agenesis, duplication and horseshoe appendix [5]. Depending upon its development and the rotation of the gut, the appendix may be found almost anywhere in the abdominal cavity [2], even ectopic appendix in the thorax has been reported [4]. To our knowledge, this is the first case that appendix is situated in the deep gluteal region, due to another rare variation of unilateral piriformis absence. Consideration of such variation would be beneficial to avoid possible complications, especially for surgeons who deal with gluteal region.

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**Fig. 1** Left piriformis is marked with long arrow, right piriformis is absent. Short arrow indicates appendix vermiformis



**Fig. 2** Arrows indicate appendix passing through greater sciatic foramen to the deep gluteal region

## Compliance with ethical standards

**Conflict of interest** The author declares that they have no conflict of interest.

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