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CASE STUDY

UNILATERAL AGENESIS OF LEVATOR ANI MUSCLE

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ABSTRACT

We reported a rare case of unilateral agenesis of levator ani. A adolescent male child came for evaluation of perineal swelling. On MRI study, we nicely depicted complete nonvizualization of unilateral levator ani muscle.

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INTRODUCTION

The levator ani is the musculotendinous structure, forms the majority of the pelvic diaphram. It supports pelvic viscera, aids in urinary and fecal evacuation as well as maintaining continence. It has three paired components, including pubococcygeus, iliococcygeus muscle and puborectalis muscle (Gray's Anatomy, 2011; Loubeyre *et al*., 2012; Moore, 2010). The pubococcygeus extends from the inner surface of the pubis and obturator fascia with fibres fusing medially at the perineal body and musculature of the prostate/ vagina. The ischiococcygeus is a triangular muscle with base attached to the lateral aspect of the inferior sacrum and coccyx and apex attached to the ischial spine. The iliococcygeus muscle attaches the inner tip of the coccyx posteriorly, posterolaterally to the ischial spine and along the tendinous arch of the obturator fascia. Anteriorly and medially, it fuses with the pubococcygeus (Fig. 1).

Case Description

A 13 years old male child presented with complaints of swelling over left perineal region. There was no associated any bladder/ bowel dysfunction. The child was referred to us for MRI pelvis. We unexpectedly found there was a rare congenital abnormality. MRI finding revealed nonvizualization of left sided puborectalis and pubococcygeus muscles (Fig. 2). There was also nonvizualization of left ischiococcygeus muscle, resulting herniation of pelvic contents (mainly fat and vessels) through ischiorectal fossa (Fig. 3). There was no herniation of any bowel component or bladder. Thus, MRI study nicely depicted complete agenesis of left sided levator ani muscle with herniation of pelvic contents. As child was not having any obvious symptom, no surgical treatment was done.

DISCUSSION

Congenital unilateral agenesis/ hypoplasia of lung, unilateral agenesis (partial/complete) of diaphragm, unilateral agenesis of kidney, testes, vas deference and hemivertebra are well known entity. Unilateral hypoplasia of levator ani muscle is one of rare congenital abnormality. Complete agenesis of unilateral levator ani is again a rarer congenital abnormality. In my best of knowledge there is no single case on pubmed. Absence of levator ani may result into herniation of bowel loop.

Large defect even leads to strangulation or intestinal obstruction. So, it needs to confirm the diagnosis of underlying cause of herniation and further management if required. So we found a very rare case of unilateral agenesis of levator ani muscle.

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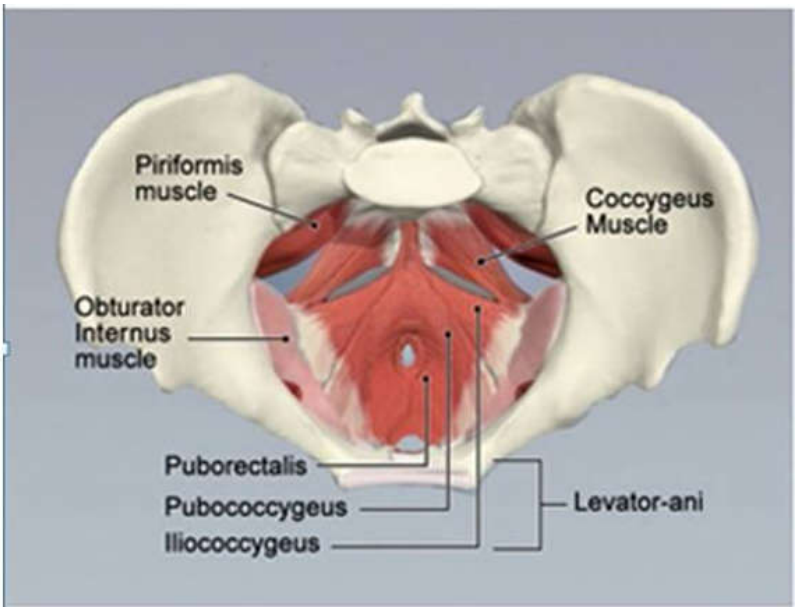

Figure 1. Diagrammatic representations of levator ani muscles

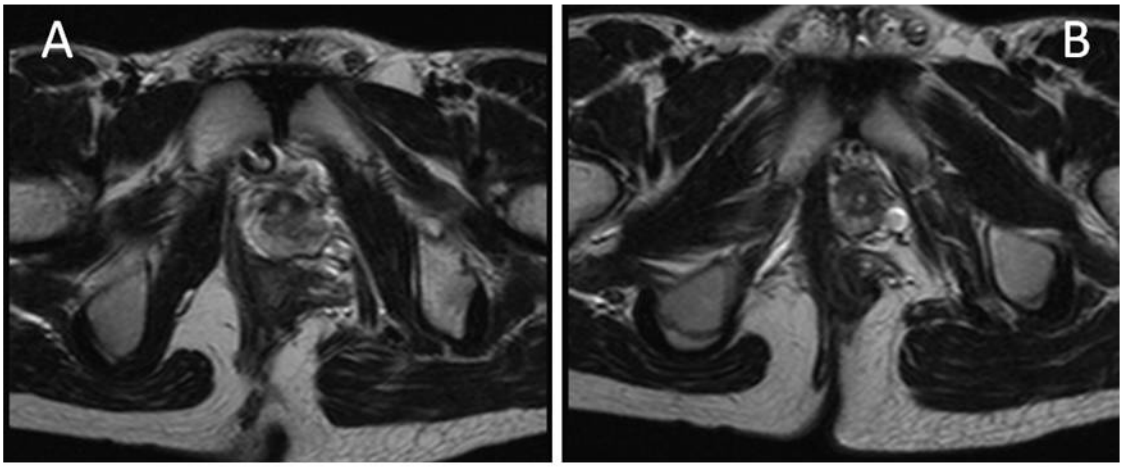

Figure 2. Axial T2W MR images showing complete nonvizualization of left sided puborectalis (1A) and pubococcygeus muscles (1B). The images are also showing left sided herniation of fat and vessels

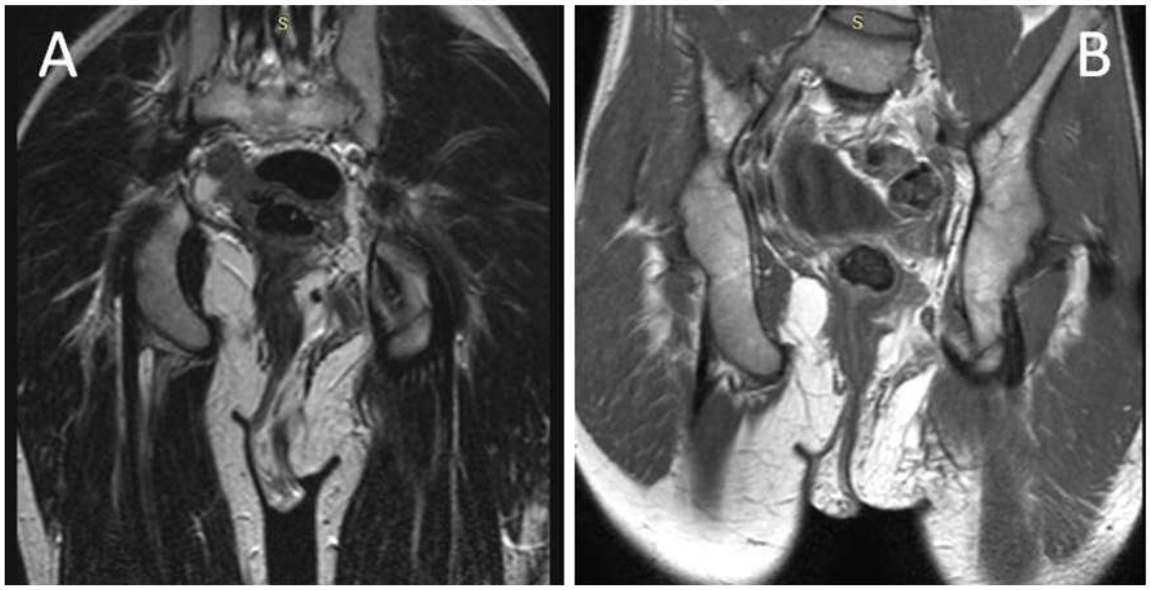

Figure 3. Coronal T2W (2A) and T2W (2B) images showing complete nonvizualization of left ischiococcygeus muscle. The herniation of mesenteric fat and vessels are better depicted in coronal images

Competing Interests

The authors declare that they have no competing interests.

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