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Imaging of Haematocolpos

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Abstract **Case Report**

Haematocolpos is the progressive accumulation of menstrual blood in the vaginal cavity. It is often the result of imperforation of the hymen. The clinical symptoms are cyclical pelvic pain and primary amenorrhoea. More rarely, it may be revealed by a pelvic mass [1, 2]. We report a case of haematocolpos secondary to hymenal imperforation diagnosed in a young girl presenting with primary amenorrhoea and a pelvic mass. Ultrasound and magnetic resonance imaging (MRI) remain the reference examinations to confirm haematocolpos and to exclude other associated genitourinary malformations [2].

Keywords: Haematocolpos, Hymenal Imperforation, Primary Amenorrhea, Pelvic Mass, MRI (Magnetic Resonance Imaging).

INTRODUCTION

Haematocolpos is the retention of menstrual blood in the vaginal cavity. This malformation is rarely detected during the neonatal period and is often revealed during the pubertal period in the presence of more or less cyclical pelvic pain associated with amenorrhoea [1]. Ultrasound is the examination of choice for diagnosing haematocolpos due to hymenal imperforation. Magnetic resonance imaging (MRI) is the imaging test of choice for confirming haematocolpos and ruling out other Muller's canal malformations or associated urological malformations.

PATIENT PRESENTATION

The patient was 12 years old and had no previous medical history. She came for treatment of menarche associated with chronic cyclical pelvic pain radiating to the lumbar region. Ultrasound of the suprapubic region was consistent with haematocolpos. MRI performed to confirm the diagnosis revealed a haematocolpos on a didelphic uterus with left renal agenesis.

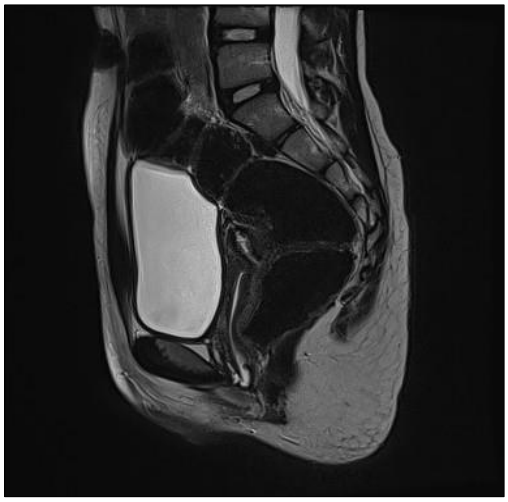

Figure 1: T2 sagittal section showing fluid retention in the left hemivagina

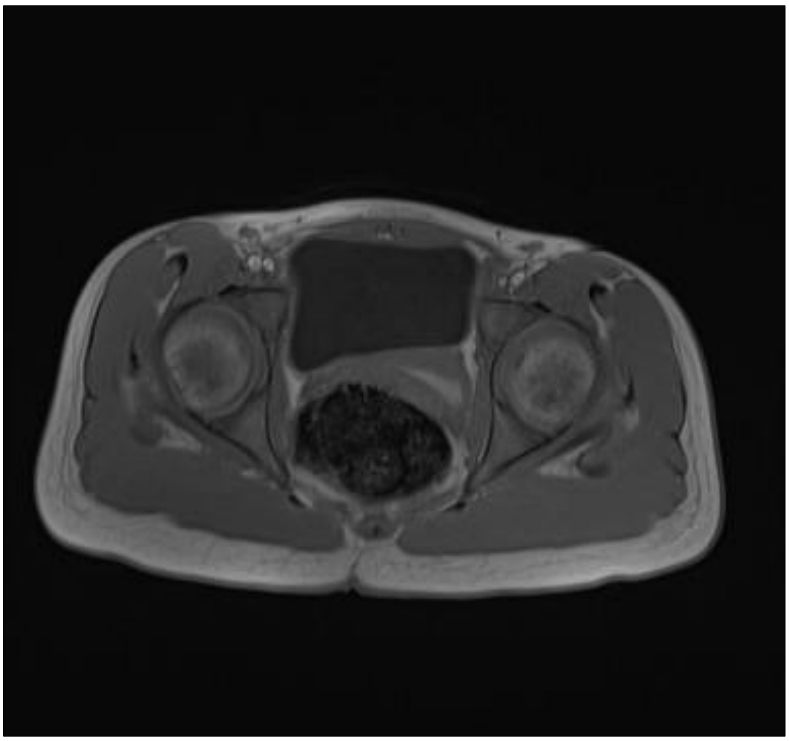

Figure 2: T1 axial section showing hematic retention of the left hemivagina

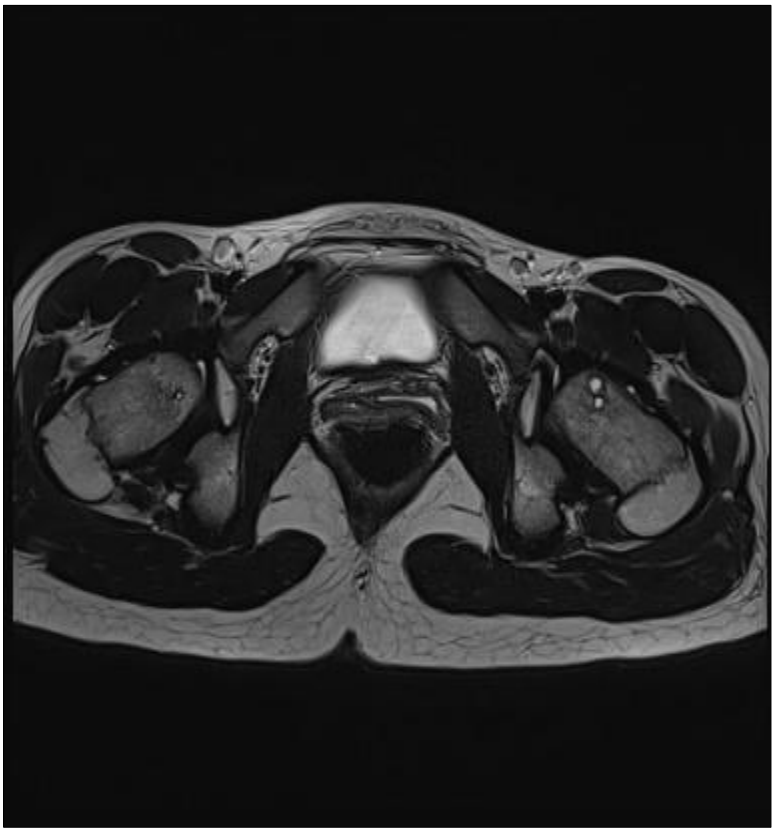

Figure 3: T2 axial section showing fluid retention of the left hemivagina

DISCUSSION

Haematocolpos and hydrocolpos are rare anomalies of the female reproductive system. The absence of channelling of the hymen and development of the vagina, isolated or associated with other congenital anomalies, are the origin of these lesions [4]. Haematocolpos associated with vaginal anomalies is much less common than that associated with an imperforate hymen and a transverse vaginal septum.

The onset of haematocolpos varies from infancy through puberty to adulthood [3, 4].

Imaging play an important role in differential diagnosis if other aetiologies are suspected. Pelvic ultrasound and nuclear magnetic resonance, which are both safe in adolescents, are useful not only for confirming the diagnosis in cases of doubt, but also for detecting any associated malformations or complications [3]. Suprapubic ultrasound shows an echogenic retrovesical image, surmounted by a small, dilated, communicating uterine cavity with fluid content if haematometry is present [1, 4]. A haematosalpinx or peritoneal effusion may also be observed. Uterine malformations and renal agenesis in the case of genital duplication are systematically sought. Rarely, Herlyn Werner Wunderlich syndrome with blind hemi-vagina, uterine duplication and unilateral renal agenesis can be distinguished [3].

Ultrasound can also show ureteropelocal dilatation if the urinary tract is compressed by the haematoscope [1]. MRI would be the best complementary exploration technique, with T2-weighted sequences giving a very good anatomical morphological analysis of the malformation. T1-weighted sequences will confirm the haematic content in the vagina and overlying uterine horn [1, 2].

Treatment of haematocolpos depends on its aetiology. In the case of imperforate hymen, it consists of a hymenotomy or hymenectomy to drain the haematocolpos [3].

CONCLUSIONS

Haematocolpos is a rare condition that should be suspected in the presence of any acute abdominopelvic pain syndrome or pelvic mass in a girl during puberty that has not yet resolved, especially as the pain is cyclical and the development of secondary sexual characteristics is normal. Imaging is essential if there is any doubt about the diagnosis. It helps to orientate the diagnosis, to look for any associated urogenital malformations and signs of compression, particularly urinary compression.

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