MR Imaging of Congenital Vaginal Anomalies

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Methods

Nine female patients, aged 15 to 25 years (mean 20 years), with normal secondary sexual characteristics, the 46, XX karyotype, and congenital vaginal anomalies requiring surgical intervention were studied. Seven patients had presented complaints of primary amenorrhea, with or without cyclic low-abdominal pain. One of them also suffered from urinary leakage. Two patients had scanty menstruation and cyclic low-abdominal pain.

A whole body superconductive 1.5T MR scanner (Visart, Toshiba) was employed and the body coil was used. All patients were scanned with spin-echo (SE) T1WI in the axial plane, and fast SE T2WI in the axial, sagittal, and oblique coronal planes of the pelvic. Slice thickness was 5 mm, with a 1-mm interval. MR imaging was performed before surgery. On each examination, the vagina, cervix, uterus and ovaries were assessed.

Results

The vaginal anomalies were categorized into three groups in our study: □ complete absence of the vagina (n=3), which is almost always accompanied with the absence of normal uterus and cervix. It is also called as Mayer-Rokitansky-Kuster-Hauser (MRKH) syndrome (Fig 1). □ Vaginal atresia (n=3) (Fig 2), one case with complicated urogenital abnormality (Fig 3). □ Transverse vaginal septum (n=2) (Fig 4). Plus 1 case showed imperforate hymen (Fig 5).

Discussion

MRI is a reliable method for evaluating vaginal anomalies. An accurate MRI examination can be helpful to surgical management. □ In patients with MRKH syndrome, i.e. Complete vaginal agenesis with only a rudimentary uterine bulb and without functioning endometrium, vaginoplasty is the choice of the treatment for sexual function. □ In patients with vaginal atresia or transverse vaginal septum, if the normal uterus and cervix are present, vaginoplasty would allow the egress of menstrual discharge, prevent complications like endometriosis, and normal pregnancy is feasible. □ In patients with vaginal anomalies, with functioning uterine corpus but without normal cervix, fertility preservation is not possible at present. Hysterectomy would be an initial procedure to prevent the development of endometriosis, and followed by vaginoplasty.

Conclusion

In patients with vaginal anomalies, MR imaging findings were essential for the appropriate choice of the surgical approach and type of procedure.

References