THE INCIDENTAL DEMONSTRATION OF MESONEPHRIC DUCT REMNANTS DURING HYSTEROSALPINGOGRAM

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SUMMARY

Unilateral opacification of the left mesonephric duct (Gartner's duct) was observed during Hysterosalpingography. Embryological and anatomical explanation for this phenomenon and a review of the literature are presented.

RESUMO

Demonstração acidental do canal de Gartner durante histerosalpingografia

Observou-se durante uma histerossalpingografia a opacificação do canal mesonefrico à esquerda, (Canal de Gartner). Fazem-se algumas considerações anatómicas e embriológicas acerca de tal defeito embriológico bem como uma revisão da literatura.

EMBRYOLOGY AND ANATOMY

The female genital organs arise from the paramesonephric (Müllerian) ducts. The cranial part of each duct becomes the fallopian tube, the intermediate parts fuse to a varying degree to form the uterus and the caudal portions unite and contribute to the development of part of the vagina [1,2].

The mesonephric (Wolffian) duct disappears except for a few remnants to be found in the broad ligament, uterine wall, and vagina [3]. The caudal part of the female mesonephric duct degenerates slowly and can usually be found in female embryos up to about the 70 mm crown-rump stage [1]. It may persist into postnatal and even adult life as Gartner's duct.

In most cases Gartner's duct is obliterated at birth, however, in a small proportion of subjects, it may be followed alongside the uterus to near level of the internal os. Here it pierces the muscular wall of the uterus and descends in the wall of the cervix uteri, gradually approaching the mucous membrane, without however, quite reaching it [4].

The duct then passes along the antero-lateral wall of the vagina to end near the hymen.

When portions of the duct remain patent, a cyst may arise in various portions along its course. In the vaginal segment, these cysts are found along the antero-lateral aspect of the vagina wall. When multiple, such cysts may resemble a string of sausages [3].

CASE REPORT

Mrs. A.V.Z., 36 years, P1 G1 (previous Caesarian section for cephalo pelvic disproportion) was referred to our unit for reversal of sterilization.

A bilateral Pomeroy procedure was performed 6 years previously. There was no history of pelvic inflammatory disease or urinary tract problems. Physical examination was non-contributory, with normal external and internal genitalia. Hysterosalpingography was performed using water soluble contrast medium introduced into the uterine cavity under image intensifier control. Radiographs taken during uterine filling demonstrated a normal uterine cavity. The isthmic portion of the right fallopian tube ended abruptly and there was non-filling of the left fallopian tube.

Venous intravasation occurred with delineation of the uterine venous network and iliac vein on the left side. In addition, a long beaded structure passing inferiorly, lateral to the vagina was filled via a narrow neck at the level of the internal os of the cervix.

The following view (Fig. 1) shows this structure passing antero, inferiorly towards the external genitalia. A four hour delayed film demonstrates an unchanged apperance to this struture (Fig. 2).

Repeat pelvic examination after the hyterosalpingogram revealed a saussage shaped elongation along the left antero-lateral wall to the vagina from the vault to the introitus, which was not noted previously.

Laparoscopy demonstrated a normal uterus. The isthmic portions of the fallopian tubes measured 2,5 cm bilaterally and the ampullary parts measured 1,5-2 cm. The ovaries were normal and no hydatid of Morgagni was seen. An intravenous pyelogram performed subsequently was normal.

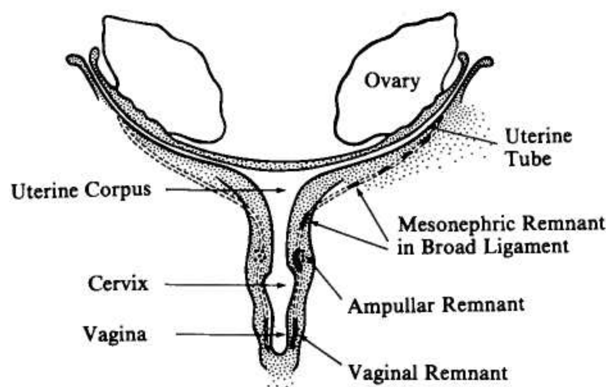

Table I

Recebido para publicação: 8 de Abril de 1987

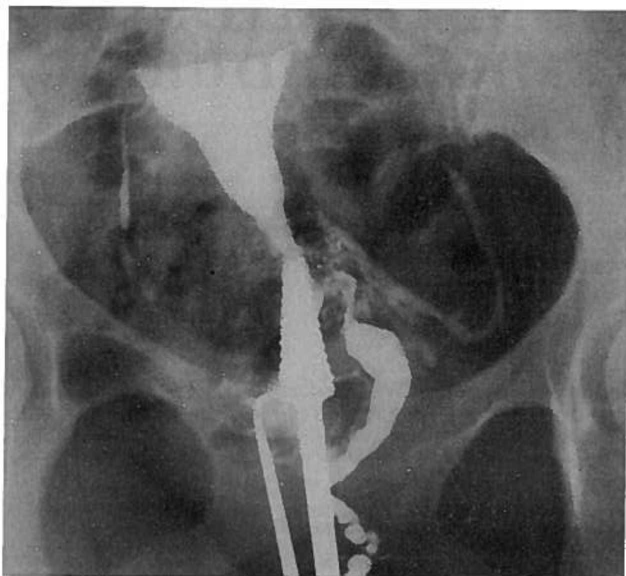

Fig. 1

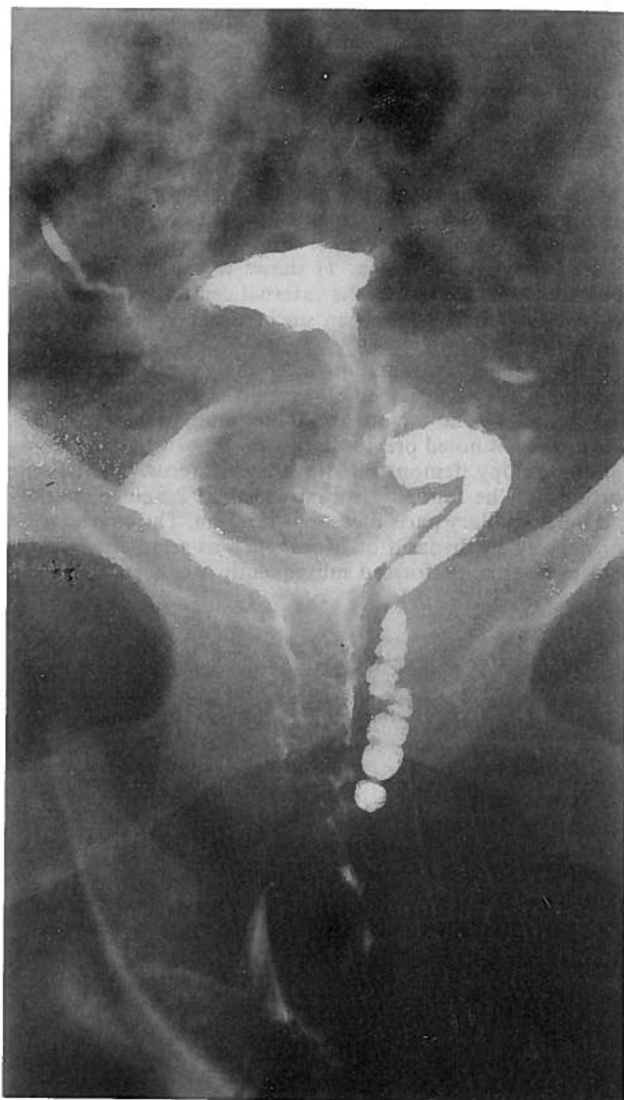

Fig. 2

DISCUSSION

During hysterosalpingography in a patient with bilateral tubal occlusion, a high intraluminal pressure was generated which resulted in venous intravasation and simultaneous filling of Gartner's duct on the left. The duct has a typical *String of sausages* appearance and fills via a narrow neck in the region of the internal os, where Gartner's duct is closest to the uterine cavity. Review of the literature shows this to be a rare finding.

Wepfer and Boex[3] report 5 cases from 820 examinations; an incidence of 0,61% where hysterosalpingography revealed a linear structure believed to be a remmant of the mesonephric duct within the uterine wall, parallel to the uterine cavity (Table 1). They found no associated uterine abnormality or evidence of tubal inflammatory disease in these cases.

Bianchi et al (cited in[3] found 11 examples of opacified mesonephric duct remnants on review of 660 hysterosalpingorams; four were on the right and seven on the left).

Bilateral mesonephric duct remnants have been described on hysterosalpingography[6].

Huffman[7] found much variation in the reported histologic incidence of persistent mesonephric duct remnants in the Cervixs. His own work revealed 5 examples from 1.192 specimens, all removed at surgery (a 0.4% incidence); whereas C. Reider (cited in[4]) found mesonephric remnants in 20% of his examinations.

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