VARICOCELES OF THE ROUND LIGAMENT IN PREGNANCY, SIMULATING INGUINAL HERNIAE

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It is worthy of note that swellings in the groin appearing for the first time in pregnancy do not seem to have attracted the attention of obstetricians and general surgeons. The similarity between femoral hernia and saphena varix is well recognized, but the likeness between a varicocele of the round ligament of the uterus appearing in the groin in pregnancy and an inguinal hernia appears to have been overlooked. A scrutiny of 16 standard textbooks in obstetrics, of 15 standard textbooks in general and operative surgery, North American and British, failed to reveal any comment. Textbooks on diseases of the vulva gave no information, and of the standard works on varicose veins only one made any reference to the subject, and then not specifically mentioning pregnancy: Verovitz (1941) states that "varices of the round ligament are often mistaken for an inguinal hernia." We believe we are describing a not uncommon condition which has been overlooked by clinicians, which is usually misdiagnosed, and which is omitted from the textbook literature.

The not infrequent occurrence of swellings in the groin, appearing for the first time in pregnancy and subsiding during the puerperium, had been noticed by us for some years. Although almost indistinguishable from an inguinal hernia on clinical examination, there seemed to be good reason to think that they were in reality varicoceles of the round ligament. Case 2, described below, stimulated our interest, so that medical officers in the antenatal clinics at Queen Charlotte's Maternity Hospital were asked to refer to us cases of "lumps in the groin." In a 12-weeks period 12 such patients were found and were followed through their pregnancy, labour, and post-natal period.

Case 1

This patient, aged 36, developed varicose veins of both legs during her first pregnancy in 1936. The veins subsided after delivery, returning during her next pregnancy, in 1951. During this second pregnancy lumps appeared in both groins, were diagnosed as herniae, and operation was advised. This advice was not taken.

She attended an antenatal clinic at Queen Charlotte's Maternity Hospital on July 27, 1953, in the 10th week of her third pregnancy, with a letter from her general practitioner referring her because of the history of inguinal herniae appearing in the previous pregnancy. On examination at that time the pregnancy was confirmed, notice being taken that varicose veins were present in both legs (including the upper thighs) and both labia majora. No mass could be produced in either groin, but a note was made that varicoceles of the groins were likely in view of the past history.

The following notes were made during the remainder of the pregnancy, the labour, and the puerperium. August 27: Swelling in right groin present (Fig. 1) diagnosed as a varicocele. September 24: Swelling in both groins, aching at the end of the day. A dragging sensation and aching in the groins continued until delivery. March 5, 1954: Spontaneous

FIG. 1.—Case 1. Photograph taken at 14th week (August 27, 1953), showing a swelling in the right groin.

FIG. 2.—Case 1. Photograph taken eight weeks after delivery (May 3, 1954).

vertex delivery; total duration of labour, 2 hours 25 minutes. March 12: Varicose veins improved, slight lump present in each groin. April 8: Very little swelling present in groins. May 3: No swelling present in either groin (Fig. 2).

Case 2

A patient, aged 27, pregnant for the first time, was booked for delivery at Queen Charlotte's Maternity Hospital, the expected date of delivery being February 16, 1953. Until October 6, 1952, no abnormality was detected, but on that attendance at the clinic the patient complained of a lump in the left groin; she was referred to an obstetric consultant, who diagnosed a left inguinal hernia, suggesting no active treatment. On January 1 varicose veins of the vulva were first noted.

At 9.40 a.m. on February 16 there was a spontaneous vertex delivery of a living female infant after a labour lasting 9 hours 50 minutes.

During the forenoon of the 17th the patient complained of pain in the right lower abdomen. On examination a tender mass was present in the right groin, measuring 1½ in. by 1 in. (3.8 by 2.5 cm.), irreducible, and diagnosed as a right inguinal hernia. At 5.30 p.m. the mass was unchanged, with normal bowel sounds. The opinion of a general surgeon was obtained, and at 9.30 p.m. he operated, the

provisional diagnosis being an irreducible right inguinal hernia. Under general anaesthesia a right oblique inguinal incision was made, dividing the right external oblique aponeurosis. This exposed the mass, which was found to be a collection of thrombosed vessels in the substance of the round ligament. This was divided, excised, and ligated at the internal abdominal ring. A small hernial sac was found to be empty; it was transfixed and excised. The inguinal canal was closed by suture of the conjoint tendon to the inguinal ligament. The post-operative recovery was uneventful, the patient leaving hospital on March 2. On April 14 healing of the right groin was perfect, and there was no evidence of a left inguinal mass.

It was thought that the "left inguinal hernia" in this case was a varicocele of the round ligament which subsided after the pregnancy, whilst a smaller varicocele of the right round ligament which was not discovered during pregnancy became thrombosed immediately after delivery, probably owing to the alteration in the size of the uterus producing a circulatory disturbance; both varicoceles were in association with varicose veins of the vulva.

Discussion

We believe that nearly all groin tumours first appearing in pregnancy are due to varicosities of the round ligament, which at first sight simulate an inguinal hernia. While in 2 out of the 12 cases under review there was little evidence of varicose veins, apart from the varicocele of the groin, in the remaining 10 varicosities of the vulva, with or without similar lesions of the thigh, were present, often to a gross degree. In seven patients a diagnosis of inguinal hernia was made when the mass was first seen, before being referred to us, and in one case operation had been advised.

It does not appear likely that a hernia of the inguinal region should make its first appearance during pregnancy, for, although there is an increase in intra-abdominal pressure, most of the structures which would fill the hernial sac (with the exception of free fluid) are kept out of the way by the bulk of the pregnant uterus and broad ligament. Some authorities (Berkeley *et al.*, 1938; Baird, 1950) state that pre-existing herniae frequently disappear during the later months of pregnancy, "the reason being that the enlarging uterus pushes the intestines away from the inguinal ring and presently blocks access to them" (Berkeley *et al.*, 1938). Strangulated inguinal herniae are extremely rare in the later months, and, in fact, Gaudier (1894) states that a strangulated inguinal hernia and pregnancy are incompatible. Although it is generally agreed that known pre-existing herniae tend to be temporarily cured during pregnancy, this series of 12 cases of swellings in the inguinal region first appearing in pregnancy was collected in the short space of 12 weeks. It is known that early in pregnancy, in the first trimester, there is a great increase in the vascularity of the pelvis, and varicose veins of the lower extremity may appear or worsen before the size of the uterus is likely to affect the venous return. The veins of the round ligament form an anastomosis with those of the vulva, and will join in any generalized varicosity—thus a varicocele of the round ligament is formed.

Clinical Features.—The clinical features of varicoceles of the round ligament are similar to those of an inguinal hernia. The patient complains of a lump and an aching feeling in the groin. The situation is identical, since both veins and hernial sac accompany the round ligament in the inguinal canal. Both swellings disappear on lying down and reappear on standing, though a varicocele may return more gradually than a hernia and is a little less circumscribed. A varicocele is of course dull on percussion and more closely resembles a hernia containing omentum than one containing bowel. The signs and symptoms of both conditions are therefore very similar, and it is only possible to make a diagnosis by the fact that in the case of the varicocele the swelling appears for the first time during pregnancy. The absence of varicose veins elsewhere does not exclude the diagnosis of a varicocele of the round

ligament. Thrombosis of the varicose veins is a complication which still further increases the resemblance between an inguinal hernia and varicocele of the round ligament, and is described in Case 2. This complication produces a firm, tender, irreducible swelling simulating a strangulated inguinal hernia, and a differential diagnosis becomes an urgent necessity, in view of the entirely different treatments required.

Treatment.—No active therapy has been found necessary in the patients we have seen. Suggestions to operate during pregnancy indicate that the probable aetiology of the lesion has not been appreciated. It is not necessary to commit a patient to bed rest because of the condition, although it is known that this occurred in a patient elsewhere, not in our series, in the belief that an inguinal hernia was present. A truss may, by giving support, add to the comfort of the patient. Reassurance, with a simple explanation of the temporary nature of the lump during pregnancy, and the recommendation of the usual supportive measures for the relief of vulval and leg varicose veins, is all that has been found necessary.

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THE SYMMETRICAL FORM OF STATUS BONNEVIE-ULLRICH (TURNER'S SYNDROME)

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In 1930 Ullrich reported a case of multiple congenital anomalies in an 8-year-old girl that was typical of a syndrome since known on the Continent as the symmetrical form of status Bonnevie-Ullrich. This child was of short stature, had a webbed neck (pterygium colli), an increased carrying angle of the arms (cubitus valgus), hypoplastic nipples, a highly arched palate, drooping angles of the mouth, hyperflexibility of the shoulder-joints, and irregular short nails of the hands and feet. The upper eyelids were prominent and heavy, giving the impression of bilateral ptosis. The ears were closely attached to the side of the head. At birth there had been a marked pitting oedema of the nuchal region and the extremities. The oedema, "congenital lymphangiectatic oedema," disappeared during the second year of life.

Ullrich (1949) observed that this syndrome is identical with Turner's syndrome and the syndrome of ovarian agenesis, which have since been described and discussed in the English language literature by authors evidently unaware of his original report. It is apparent, however, that, whereas Ullrich (1930) described the congenital anomalies in great detail, it was the endocrinological aspects which aroused most interest in the American