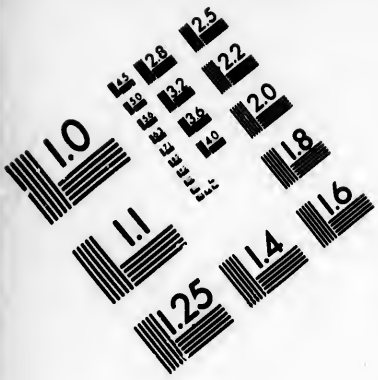


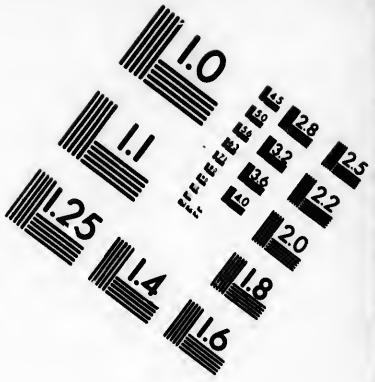
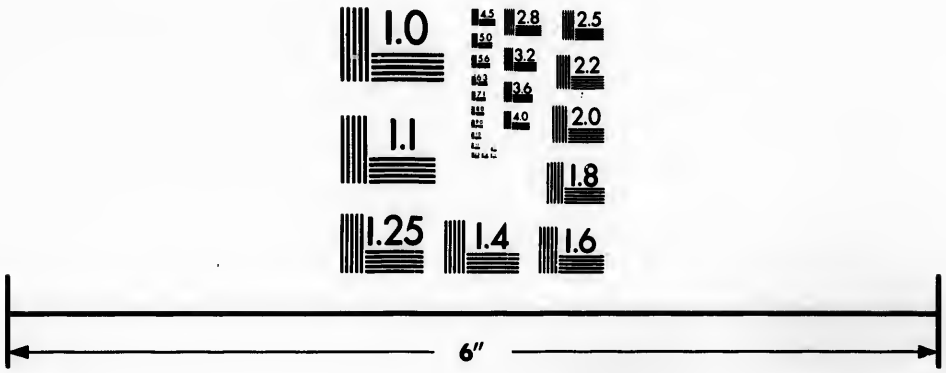
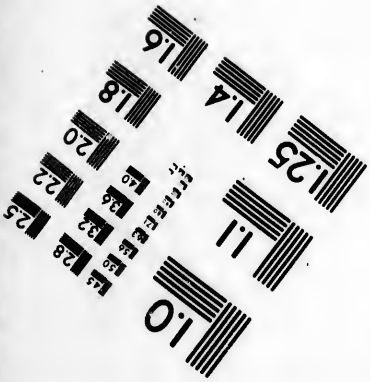
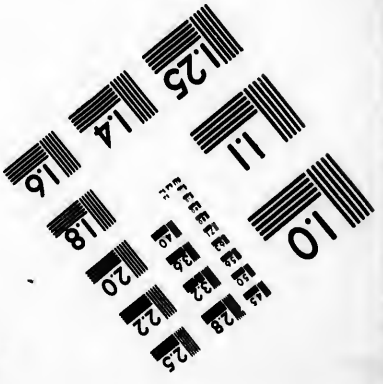


IMAGE EVALUATION TEST TARGET (MT-3)







Photographic Sciences Corporation

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

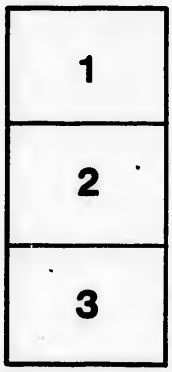
L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

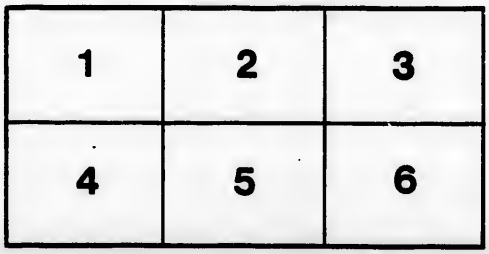
- ☐ Coloured covers/ Couverture de couleur
- ☐ Covers damaged/ Couverture endommagée
- ☐ Covers restored and/or laminated/ Couverture restaurée et/ou pelliculée
- ☐ Cover title missing/ Le titre de couverture manque
- ☐ Coloured maps/ Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black)/ Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations/ Planches et/ou illustrations en couleur
- ☐ Bound with other material/ Relié avec d'autres documents
- ☐ Tight binding may cause shadows or distortion along interior margin/ La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- ☐ Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/ Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- ☐ Additional comments:/ Commentaires supplémentaires:

- ☐ Coloured pages/ Pages de couleur
- ☐ Pages damaged/ Pages endommagées
- ☐ Pages restored and/or laminated/ Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached/ Pages détachées
- ☑ Showthrough/ Transparence
- ☐ Quality of print varies/ Qualité inégale de l'impression
- ☐ Includes supplementary material/ Comprend du matériel supplémentaire
- ☐ Only edition available/ Seule édition disponible
- ☐ Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image/ Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
							✓				





Reprinted from the Montreal Medical Journal, October, 1895.

SOME TUMOURS OF THE INGUINAL REGION SIMULATING HERNIA.*

By FRANCIS J. SHEPHERD, M.D.

Professor of Anatomy and Lecturer on Operative Surgery in McGill University; Surgeon to the Montreal General Hospital.

The tumours to which reference will be made in this paper are not glandular enlargements or new growths, but tumours caused by the incomplete obliteration of the processus vaginalis, due to an arrest of development, resulting in a connection between the peritoneal cavity and the unobliterated process. This persistent funicular process may contain omentum or simply fluid, the opening of communication being too small for the passage of bowel.

I might remind you that the tubular process of peritoneum which descends with the testicle into the scrotum is freely continuous with the general peritoneal cavity up to the later months of fœtal life. At birth the tunica vaginalis enveloping the testicle is all that normally remains of this tubular process, the obliteration first taking place at two points, viz., (1) at the internal ring, and (2) a little above the epididymis; now we have a closed tube and the sac of the tunica vaginalis. The tube shrinks into a fibrous cord and the serous sac enveloping the testicle remains as the tunica vaginalis. Occasionally the tubular process of peritoneum closes only at the lower point and a funicular process of peritoneum remains lying on the cord and continuous with the peritoneal cavity at the internal ring; in such cases bowel may be contained in the process, and this is one form of congenital hernia. But the cases of which I wish to speak are those where the closure at the internal ring commences but the obliteration is not completed. A small opening may be left, too small to admit bowel, but large

* Read by title at the meeting of the Canadian Medical Association, August 28, 1895.

enough to allow omentum to pass, or the opening or openings may be so minute as only to allow fluid to come through by drops. These cases are always puzzling. A man presents himself with a tumour in the groin, having a history of reducibility on lying down, but of recurrence on moving about. Sometimes the tumour is tender to the touch, and handling it causes nausea and other sensations. On trying to reduce it one finds that this is not possible. In one of the cases related below it seemed as if the young man had a third testicle on the left side. The lump was tender on pressure, non-fluctuating, and squeezing it gave the same sensation as compression of the testicle; yet he said that this tumour never was present in the morning on getting up and that after moving about for some hours it reappeared. On cutting down on the tumour a funicular process of peritoneum was found connected with the general peritoneal cavity through the internal ring by a hollow, stalk-like process, and the communication between the sac and the peritoneum was so small that fluid could only be squeezed through by drops; hence the impossibility of reduction and the reason of the gradual formation of the tumour on going about. In another case the same condition existed in a female child in connection with the round ligament. The funicular process of peritoneum (the canal of Nuck) which accompanies the round ligament into the inguinal canal had never been obliterated. There was a largish tumour, very tender, which disappeared after the child had been lying down for some time, but always reappeared on moving about. Here the same condition was found, a sac with a stalk-like process connecting it with the peritoneal cavity, the opening being so small as to be almost invisible. The shape of the sac was very like a Florence flask.

In cases where the opening is larger omentum may be found in the sac as well as fluid. Such a case is reported below, where a small piece of omentum was attached to the bottom of the sac and where the patient had worn a truss for years with great discomfort and had frequent attacks of pain, vomiting and purging. When the omentum and sac were removed these all disappeared. It is not uncommon to find in young male infants a swelling in the groin which gives the mother considerable uneasiness. This usually comes on suddenly, is of considerable size, may be tender on pressure, but it is fluctuating and transmits light. In such cases the obliteration of the sac at the internal ring, I take it, has not been sufficiently solid, and during the strain of crying perhaps it has given way sufficiently to allow peritoneal fluid to percolate through into the yet unobliterated tube of peritoneum. In fact, a funicular process is thus sometimes established. These cases need excite no alarm and usually get well if left alone

If the fluid does not disappear tapping may be resorted to, and if this does not do the sac can be dissected out. Encysted hydroceles of the cord often originate, in this way the upper opening again closing—but of course, as a rule, their growth is slow and is due to the secretions from the unobliterated tubular portion of peritoneum between the internal ring and epididymis of the testicle.

In not a few of these cases of persistence of the funicular process there is also present an infantile sac which may or may not contain bowel. This sac is also congenital, as shown by its close connection with the spermatic cord, and it is situated behind the funicular process. I have operated on several such cases, but always for the radical cure of hernia. On cutting down one first reaches a sac which may contain fluid, as does a hydrocele sac, and bulging into this is a second sac which contains the enterocele. In such cases care must be exercised not to inadvertently cut the vas deferens, which above at the neck of the sac is always internal and behind, but below, may cross over the fundus of the sac, and so run the risk of being wounded.

I have seen many cases of these fluid tumours treated by a truss in the belief that a hernia existed. If the truss be put on in the morning before the fluid has re-accumulated a cure may result, but in other cases the fluid accumulates in spite of the truss and causes much pain.

CASE I.—*Hernia of omentum with the funicular process—Recurrent attacks of pain—Operation—Cure.*

H. L., æt. 22, a tall, strong, healthy-looking young man, was sent to me for radical cure of hernia on March 26th, 1896, with the following history: In March, 1887, following exposure to cold, he was seized with severe pains in the left inguinal region, which after some time extended to the lower zone of the abdomen. This pain was accompanied by severe purging, the stools being very watery. Soon after he noticed a swelling in the left groin; this swelling at times disappeared, but always returned when lying down, especially at night. There has always been a dull, aching pain in the left groin since he first noticed the lump. Since the first attack of pain and purging in 1887 he has often been laid up with similar attacks, but none so severe as the first. Sometimes these attacks last two or three days, sometimes two weeks. Since the first week in January he has dragging pains in his groin, but has not noticed any swelling. Wears a truss. On examining him I found some thickening about the left cord in the inguinal canal and some what beyond it; there was also a slight varicocele. Nothing like a hernia to be felt. He says the dragging pains are now constant in inguinal region and lower part of

the abdomen and that he has almost continual nausea. He insisted on me cutting down and seeing what the matter was, so on March 29th, having prepared patient as if for a radical cure of hernia, I cut down over the thickening in left inguinal canal and found a thin sac with a narrow neck continuous with the internal ring and the peritoneal cavity. In this sac was a small piece of omentum tightly grasped by the internal ring and attached to the lower end of the sac, which as it emerged from the canal was somewhat large, the whole being the shape of a Florence flask. The lower part of the sac was closely adherent to the tunica vaginalis. Closely adherent to the posterior surface of this sac was the cord, which was spread out considerably, the vas deferens being some distance away and internal to the vessels. The sac was opened, the omentum tied off and the sac closed by catgut ligature and cut off below this. As the external ring was rather large its columns were brought together with two strong catgut sutures and the omentum sutured with horse-hair. No drain used. The patient recovered rapidly, the wound healing by first intention. Since then I have heard from him and he says he has now great comfort, no more pain or nausea, and he feels like a different man. This was no doubt a case of unobliterated funicular process into which omentum has been forced during his first attack of colic, and this dragging on the omentum accounted for all the pains and nausea he had suffered from for years.

CASE II.—*Swelling in left inguinal region and scrotum simulating hernia—Operation—Cure.*

Thos. H., æt. 21, was admitted into hospital May 16th, 1895, complaining of a swelling in the left groin and scrotum, which at times pained him severely.

History.—In December, 1894, following a strain, patient perceived a swelling descending into the left side of the scrotum about the size of a pigeon's egg; he had severe pains in the groin and back. These pains disappeared and he returned to work and found that whenever he put forward the left leg the pain returned, while at rest the pain disappeared. In the morning the swelling would have all disappeared. At first the swelling disappeared entirely for a week, then returned when he went about and disappeared slowly on lying down—that is, he went to bed with the swelling well marked and on waking in the morning it had disappeared; on rising it took some hours before the swelling reappeared and was its proper size. After a time the swelling ceased to pain him, and it was not until he began to play football in March last the pain returned severely and he consulted a doctor who told him it was probably a rupture. He tried to reduce it, but

could not, and ordered him a suspensory bandage which relieved the pain. He again played football and again the pain returned, so he determined to enter hospital for operation.

On examination I found on left side of scrotum a couple of inches above the epididymis and reaching up to the inguinal canal a tense, hard swelling the size of a large olive. This was very tender and felt like a third testicle. The patient said on pressing it firmly all the sensations of pressing a testicle were produced. The external ring could be felt, but nothing but the cord was in it. No fluctuation could be felt No impulse on coughing and no vomiting. He was put to bed and next day no trace of the swelling could be found, nor could it be made to reappear by coughing or straining or moving about. The boy then for the first time informed me that the swelling would not come on for some hours after he had been at work, and was only fully developed by the afternoon. I immediately concluded we had to deal with a funicular sac with a small opening, through which fluid slowly percolated.

On May 17th I cut down and found a flask-shaped sac attached below to the tunica vaginalis, which over-lapped it, and ending above in a narrow neck which entered the internal ring. There appeared to be only a pin-hole connection between the peritoneal cavity and this sac, which was now empty. Spread over it behind was the spermatic cord and vessels. The sac was excised and the large rings closed with catgut sutures and the edges of the skin wound brought together with horse-hair. A rapid recovery took place, the wound healing by first intention. Since then the boy has been perfectly relieved of his pain and discomfort.

CASE III.—*Tumour of the left groin simulating hernia and due to a persistent canal of Nuck.*

Fanny W., æt. 2½ years, was brought to the Montreal General Hospital June 18th, 1895, suffering from a painful tumour in the left groin.

History.—When three months old she had whooping cough, and during this period the parents first noticed a small lump in the left groin near the pubic spine. This lump disappeared and reappeared at intervals. It was always seen after a crying fit.

On June 15th last the child fell from her carriage, and soon after the lump on the groin was found to be much larger and to remain so. It was tender on pressure.

When seen the child, which was a healthy female, presented a tumour the size of a small hen's egg in the left groin, commencing

above the external abdominal ring and proceeding downwards and inwards. It was tense, tender, non-fluctuating and dull on percussion. It could not be reduced, nor was it translucent. No elevation of temperature and no symptoms of strangulated hernia were present. The child was admitted and next morning the tumour was only about half the size and much less tense. Next day it had disappeared entirely. The parents took the child home, but returned in a day or two with the tumour as large as ever. Operation was advised and consented to.

On June 24th the child was etherized and the parts prepared as if for a radical cure of hernia. An incision two inches long was made over the tumour, which was now of small size owing to the child having been quiet and in bed for twenty-four hours. After cutting through the skin, a thick layer of fat, and fascia, a sac was reached which contained fluid. This was dissected out and found to be connected with the peritoneum by a stalk-like process which passed up into the abdomen with the round ligament through the inguinal canal. The sac was tied off and the wound closed. The connection with the peritoneum was so fine that a small probe could not be passed, but water could be made to percolate into the sac below through minute openings. The wound closed by immediate union and the patient was rapidly convalescent and discharged from hospital in ten days.

This sac was without doubt a portion of the process of peritoneum which descended through the inguinal canal with the round ligament and remained unobliterated; in fact it was a persistent canal of Nuck.

CASE IV.—*Tumour of left side of scrotum suddenly appearing and simulating hernia.*

A. R., æt. four months, a healthy male infant, who had never any symptoms of swelling about the groin, was brought to me on June 28th, 1895, with a tumour in the left scrotum and with the following history: The night previous, after a severe crying fit, the nurse noticed a large swelling in left side of scrotum. This was tender and red, and ever since the child had been restless and uneasy.

On examining it I found a large tense swelling above the left testicle and which extended into the inguinal canal. It was tender and increased when the child cried or sat up. The tumour was very tense and elastic, irreducible and dull on percussion, but on testing it with transmitted light was found translucent, I immediately came to the conclusion that it was a case of re-opening of an imperfectly obliterated funicular process and advised a cooling lotion and rest. In a week I saw the child again. The tumour was somewhat smaller, but still as tense and elastic as ever.

There were no constitutional symptoms and the child slept and nursed well. So I told the parents there was nothing to fear and that probably the swelling would disappear of itself, if not, a small operation, which they much dreaded, would easily cure the case.

A month later the tumour had almost entirely disappeared and there was nothing much noticeable about the scrotum. Whether it will reappear, of course, is uncertain, but at such a tender age it is probable that the closing process will recommence and that the separation from the peritoneal cavity will be permanent.