

Yale University

EliScholar – A Digital Platform for Scholarly Publishing at Yale

Yale Medicine Thesis Digital Library

School of Medicine

1-1-1858

Dissertation on hernia of the indirect inguinal variety

Timothy Beers Townsend
Yale University.

Follow this and additional works at: <https://elischolar.library.yale.edu/ymtdl>



Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

Townsend, Timothy Beers, "Dissertation on hernia of the indirect inguinal variety" (1858). *Yale Medicine Thesis Digital Library*. 3798.

<https://elischolar.library.yale.edu/ymtdl/3798>

This Open Access Thesis is brought to you for free and open access by the School of Medicine at EliScholar – A Digital Platform for Scholarly Publishing at Yale. It has been accepted for inclusion in Yale Medicine Thesis Digital Library by an authorized administrator of EliScholar – A Digital Platform for Scholarly Publishing at Yale. For more information, please contact elischolar@yale.edu.



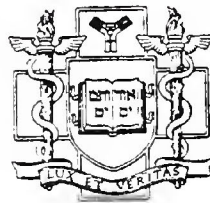


Digitized by the Internet Archive
in 2017 with funding from
Arcadia Fund

https://archive.org/details/thesesformd1842100yale_13

Harvey Cushing / John Hay Whitney
Medical Library

HISTORICAL LIBRARY



Yale University

1858-59



Archives

T113

Y11

1858-1859

The subject which I have selected from the long list of diseases is hernia of the indirect, inguinal variety.

This is, one of the most important subjects within the province of Surgery, as the life of the patient often depends upon the scientific, and practical knowledge of his surgical attendants.

It is not my intention to enter into a minute, and detailed description, but merely to notice its most important characteristics, and modes of treatment.

The term hernia usually signifies the protrusion of any viscus from its natural cavity, and when used alone refers solely to the abdominal; but we find an exception to this as we too often do in treatises on medicine, confounding the student and throwing obstacles in the way of his scientific investigations.

We may have a portion of intestine entangled, and constricted in that

lamina of peritonaeum which is reflected over the intestinal canal exhibiting nearly all the rational symptoms of that viscus when protruded through its parietes, and yet remaining wholly within its natural cavity.

This form of hernia is situated at the lower portion of the abdomen, and it is there that the parietes vary in several respects.

Upon examination we find the lower border terminating in a ligament (called Poupart's), which is formed by the rounded border of the tendon of the external oblique muscle, extending from the anterior superior spinous process of the ilium to the pubis.

Immediately before it reaches the pubis it bifurcates one leg making its insertion at the spine, and the other at the angle. Thus a triangular space results which is strengthened by

tendinous fibres thrown across its apex forming the external abdominal ring. There is also an internal abdominal ring which is formed by the transversalis fascia. It is situated about half way between the anterior superior process of the ilium and symphysis pubis, and half an inch above Poupart's ligament. Connecting these rings is the inguinal canal, which is about one and one half of an inch in length, and less than one quarter in width, the direction of which is obliquely downwards towards the median line of the body.

²The floor is formed by the transversalis fascia, and the covering by the tendon of the external oblique muscle.

Its internal orifice is closed by the infundibuliform fascia, and the internal by the intercolumnar fascia.

In the male it gives passage to the testicle in its descent into the scrotum, and

afterwards contains the vas deferens, & spermatic vessels, and nerves; in the female it contains only the round ligament. It is through these as they seem to us deficiencies in the abdominal parietis that this form of hernia escapes.

The organs most liable to hernial protrusion are the small intestines, omentum, and arch of the colon, but all of them have been found protruded partially or entirely especially in cases of congenital deficiency.

In the majority of cases the hernial sac will be found to contain a portion of the small intestine, with, or without the omentum.

This viscus has a greater freedom of motion than any of the other viscera, and by virtue of this free motion, and its specific gravity, together with the pressure exerted on it by the other organs it has a constant tendency to protrusion.

Thus we find it commencing at the internal abdominal ring, pushing the peritoneum and infundibular fascia before it, entering the inguinal canal in connection with the spermatic cord in the male, and round ligament in the female, traveling its whole extent and emerging at the external abdominal ring, where it develops itself by pressure on the surrounding tissues, or passes down into the scrotum or external labia forming the scrotal hernia in the male and pudendal in the female.

There are but two important blood vessels in this region the epigastric, and circumflexa ilii arteries; both given off from the external iliac just before it passes under Poupart's ligament. The former which is the most important is given off from

the internal side of the external iliac,
passes forwards between the peritoneum
and transversalis fascia to enter the
sheath of the rectus which it perforates
at about its lower third, anastomosing
it supplies that muscle and anastomotes
with the internal mammary artery.

In its ascent it passes immediately between
the abdominal rings and is crossed at its
origin by the vas deferens in the male,
and round ligament in the female.
The latter arises also from the external
iliac nearly opposite to the epigastric.

It ascends obliquely along Poupart's ligament
and curving around the crest of the
ilium between the attachments of the
internal oblique and transversalis muscles
inseculates the ilio-lumbar and inferior
lumbar arteries.

The coverings of the femoral tumor vary
in number with the different authors
on anatomy.

By careful dissections almost any number may be found, but in the majority of cases they are considered as six.

Commencing externally we turn back the common integument; under this ^{is the} fascia superficialis which like the common integument extends over the whole body; after laying this aside we expose the intercolumnar fascia which is composed of cellular, and fibrous tissue and attached to the pillars of the external abdominal ring, closing it in the natural state of the parts. Removing this we have presented to us bands of muscular fibres separated from each other and running from the apex, to the base of the tumor; this is the cremaster-muscle, which is a part of the internal oblique arising from the middle of Poupart's ligament and forming a series of loops upon the spermatic cord.

Under this is the transversalis or infun-
-dibuliform fascia, and peritonaeum.
The former is a lamina of cellular tissue
which closes the internal abdominal ring.
The internal covering or peritonaeum is
the serous membrane of the abdomen,
it is like all serous membranes a closed
sac except in the female. It covers the
viscera, and is reflected over the parietes
of the abdomen. By its smooth surface
and secretion it facilitates the movements
of the abdominal viscera.

The causes are predisposing, and exciting.
Of the predisposing we have weakness
of the abdominal parietes which may
be produced by various circumstances;
there may be congenital malformation
or deficiency of the proper structures,
weakness depending upon some morbid,
or healthy action, as abscesses, dropsy,
injuries causing a disintegration of
the tissues, distention from the pregnant,

often; again some portions are naturally weaker than others as in the situation of this variety about the abdominal rings. If the exciting cause violent muscular actions depending upon obstructions in the intestinal canal, passing of urinary calculi, and ineffectual attempts to void the urine from disease of the prostate, spasm of the sphincter urinae, strictures, &c. Strain is also frequently produced by violent bodily exertion, as when lifting heavy weights and the like especially if the tissues are relaxed, or weakened by previous disease. Jumping from considerable heights with the muscles in a state of rigidity upon some firm body is frequently an exciting cause.

Sometimes the intestine follows the testicle in its descent and engages in the canal before the internal ring closes. This is the congenital form.

These symptoms often make their appearance

in the midst of some violent muscular contraction, the patient feels as if something had broken or ruptured in the lower portion of the abdomen, and upon examination a tumor variable in size presents itself, which may or may not be returned within the cavity. If the inflammation attending the laceration is no greater than usual in other parts of the body from a similar cause, and the portion of viscus readily returns the symptoms will be of a mild character, and the constitution be but slightly involved; but on the other hand if the portion of viscus becomes impacted, and the inflammation is so great that the circulation is impeded, and afterwards arrested, then we have all the symptoms of strangulated hernia, viz. those of prostration, reaction, and mortification.

In the state of prostration the skin is cold, flatulence and colicky pains with sense of tightness across the abdomen,

a great deal of uneasiness about the
Stomach and point of constriction,
pulse small, wiry, and rapid.

After the intestines are evacuated
below the point of stricture, (which
occurrence often gives the impression
that there is no stricture) continual
straining with attempts to defecate,
nausea, pale and distressed counte-
-nance. These are followed by reaction.
The skin becomes warm, pulse full,
and hard, face flushed, extreme
restlessness, nausea, and vomiting,
first of the contents of the stomach,
then bile and mucus, and afterwards
the contents of the upper portion of
the small intestine. Tenderness on
and about the tumor which extends
over the abdomen &c.

After a variable time the constricted
parts begin to mortify, the surface
becomes wet with perspiration, skin

cold and clammy, pulse very rapid
small and tremulous. Hypersecretive
condition, vomiting of great quan-
-tities of feces, abdomen tumid, tongue
dry, teeth coated. Auscultation
abdomen and tumor not tender but
dusky red and empty-sounding.
If the tumor is in the scrotum and is
shaken the sound is like the one
produced by shaking peas in a black-
-star. If pain ceases and the patient
thinks that he will recover soon
dies.

As to the diagnosis of indirect ingui-
-nal hernia it may be mistaken for
several other morbid conditions
situated in or about the inguinal
region, as abscess, encysted or diffused
lymphatics of the cord, fatty or other
tumors, the lodgment of the testis
in the inguinal canal, and the direct
form of inguinal hernia.

It may also be taken for Colic, and other diseased conditions of the abdominal viscera.

⁴ Swiss abscess. If an abscess should point in the inguinal canal it would be distinguished from a hernial protrusion, by the previous symptoms accompanying the formation of an abscess, and the soft fluctuating feel of the tumor, which though reducible by pressure, and returning on coughing with a distinct impulse, yet does not present the solid character and gurgling sensation of a hernia.

⁵ Non-encysted or diffused hydrocele of the cord. In this case you have a well defined tumor on the spermatic cord, it cannot be reduced into the cavity of the abdomen, and has no gurgling noise. The absence of a distinct impulse on coughing, the impossibility of feeling the cord in a free and

natural state, and its remaining for a long time of the same side prevents it from being confounded with hernia. Gallly or other tumors, these are occasionally found on the cord, but their distinct circumscribed form, limited size, and giving no impulse on coughing, with other general symptoms make their diagnosis easy.

The lodgement of the testes in the inguinal canal. This will give rise to a tumor closely resembling a tubercle, and if it should happen to become inflamed in this situation, the diagnosis from strangulated hernia might be very difficult. But the absence of that organ in its natural position, the sickening pain, absence of gurgling and the undisturbed condition of the intestinal canal, together with other symptoms which have been mentioned will usually prevent a mistake.

The direct form may be mistaken for the direct form if it is of long standing, as the tissues between the rings by the constant pressure exerted on them by the tumor become condensed, and thus we have indirect, becoming direct by mechanical causes.

The main point to be considered in this case, is the position of the epigastric artery, for if the hernia should become strangulated, and an operation be required care must be taken not to wound it.

When it descends into the scrotum it may be confounded with first hydrocele of the tunica vaginalis, In this case the tumor is oval, or pyriform, usually translucent, unchangeable in size or shape by pressure, the cord clear and distinct above, absence of impulse on coughing, and gurgling in attempts at reduction.

varicocele. When this is suspected let
the patient assume the reclining posture,
then place the hand over the abdominal
ring, then upon returning to the up-
right position if it is hernia it can-
not return, but if varicocele it will
return because the veins are filled by
the spermatic arteries. Tumors of the testis
may be distinguished by their solid feel and
other characteristic symptoms. In hematocele
the tumor is solid, opaque, pyriform, absence
of gurgling irreducibility &c.

Thus in a limited and imperfect manner
I have noticed some of the diseased conditions
which may be confounded with hernia.
Much could be said upon this important
topic, but as I deem what I have mention-
ed as sufficient, I will pass to the Prog-
nosis-

The sac sometimes attains to an enormous
size. Nearly all the abdominal organs
have been found within it, thus making

it almost as large as the uterine and extending down to and below the knee. It may remain continually external or return and reappear according to the position of the patient through the course of life without any serious symptoms occurring or it may become strangulated as it more usually is at its first appearance terminating the life of the patient in a short time if not relieved by the prompt and efficient operations of the Surgeon.

The treatment is first that for the reducible, secondly for the irreducible and thirdly for the strangulated condition, the reducible. In this condition of the hernial tumor all that is indicated is its reduction and afterwards the application of the truss. It will generally return upon assuming the supine position but if it does not measures must be taken which will

to be described when retaining the truss
-ment for the strangulated condition
After it is within the abdomen the
truss is to be applied to prevent its
return This should be nicely adjusted
to the patient so that the pad may
press directly over the internal abdominal
ring and must be worn continually
day and night This in children and
recent hernia produced by violence
usually produces a radical cure but
in middle and old age a palliative
result only can be expected There is
one exception to the immediate appli-
-cation of the truss after the reduction
of the tumor and that is in the infan-
-tile variety when the intestine follows
the testicle and is in immediate contact
before it emerges from the inguinal
canal Almost an endless variety of pads
has been devised and employed but
the main object is to prevent its return.

Practicable, the palliative treatment is all that can be employed. Sustain the parts with bandages the sac truss is the only one that can be worn as the others might excite inflammation and on account of the adhesions an operation is inadmissible (unless the life of the patient is in danger) both from the improbability of returning it after the sac is opened and from the fact that it would be likely to act as a foreign body in the abdomen if reduced. Keep the patient as comfortable as possible open the bowels with laxatives prevent constipation Good habits and light diet should be enjoined and all causes that would tend to excite inflammation should be strenuously avoided. Sometimes when the tumor is small and recent weights placed upon and maintained for some time together with low diet and cathartics will by causing absorption lessen the size and bring about its reduction.

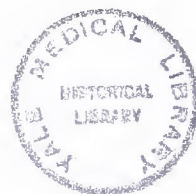
In Strangulated, When the tumor becomes
strangulated the most active treatment
should be employed and first the patient
Place the patient in the supine position
with the shoulders raised the lower ex-
tremities in a perfect state of flexion
and the knee of the affected side turned
inwards In this position all the muscles
are relaxed as far as possible, then the hand
of the surgeon should be introduced between
the thighs of the patient, the tumor grasped
with one or both hands and by gentle
manipulation the contents are to be
returned. If they do not readily return
draw down gently the neck of the sac
pushing back first the contents nearest
to the ring and so continue until the
intestine is emptied After they are in
the cavity of the abdomen then proceed
to return the mass in exactly the same
manner that the contents were disposed of
No great amount of force should be

employed and the direction should
be in the axis of the inguinal canal
It should not be continued over fifteen
or twenty minutes for fear of inducing
inflammation. If these measures fail others
should then be employed as opium, cold
water, ice, venisection, tobacco enema, tartar-
emetic, ether, chloroform the warm bath &c
After these have been judiciously employed
and no benefit results the operation
should be immediately resorted to; the ear-
lier the better and if it is performed before
inflammation comes on the chance for
success is great. But if delayed the life
of the patient may be forfeited. The operation
generally performed consists in opening the
sac dividing the stricture and returning
the intestine. Operation. The patient should
be brought to the edge of the bed the blad-
-der emptied and the part included in
the operation shaved; an incision is then
made of sufficient length commencing

a little above the external abdominal
ring through the common integument, after-
wards the operation is continued by punching
up portions with the forceps and dividing
with a scalpel, then introduce a director
in the opening made and divide up and
down, proceed in this manner till the sac
is reached which may be known by its
rounded and tense appearance and
the arborescent arrangement of the vessels
upon its surface. A portion of the sac is
then to be punched up and pulled between
the thumb and finger to ascertain that
no portion of the intestine is included, then
grasp with the forceps a portion and cut
upon the points with a scalpel laid
horizontally to the tumor, introduce the
director and divide as before.

When the sac is opened a greater or less
amount of serum will flow out, and is
a sign that it is opened.

Don retain the structure by carrying up
a director if the finger cannot be
used. In the same place the hernia
ring and then with both instrum-
ents in a line parallel to the
axis of the body separate them and
the fibres of the tendon of the external
oblique will be felt to give way, then
return the viscera as before described
if matification has not taken place
apply proper dressings and treat
the indications as they arise.



YALE MEDICAL LIBRARY



3 9002 08670 4765

Accession no. 23005

Author Yale University.
Theses in Doctor
of Medicine

Call no. Archives

T113

v11

1858-9

