CHILD INGUINAL HERNIOTOMY
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FILE NAME SW-CHIH
OPERATION NO 036
SURGEON...............M.H.EDWARDS
Last updated 01 12 06
CHILD INGUINAL HERNIOTOMY
GRADE 4 (SEVERE)

THESE STEPS COVER

PATIENT LESS THAN 13 YEARS OLD
MALE OR FEMALE
UNILATERAL INGUINAL HERNIOTOMY
BILATERAL INGUINAL HERNIOTOMY
REDO HERNIOTOMY
ASSOCIATED ORCHIDOPEXY

THESE STEPS DO NOT COVER

PATIENT 13 YEARS OR MORE
SEE REPAIR OF INGUINAL HERNIA (ADULT)
FILE NAME SW-ADIH

SECTIONS

PAGE  STEP
NUMBER NUMBER
3 1 PRELIMINARIES
3 8 ANAESTHESIA
3 9 POSITION
SURGEON
STEP
NUMBER

1 PRELIMINARIES - READ ON

2 CHECK YOU HAVE THE CORRECT PATIENT

3 CHECK YOU HAVE THE CORRECT SIDE
CHECK THE CONDITION HAS NOT CHANGED SINCE LAST SEEN

CHECK THERE IS NO OTHER PROCEDURE TO DO

FOR A CHILD UNDER 2 YEARS

CHECK AGAINST HYPOTHERMIA

Check the theatre is as close to 30 degrees C as possible.

Check the child is covered with insulating cotton wool sheets, including over the head, except from the costal margin to the knees.

Check the child's blankets are being warmed for the end of the operation.

CHECK THERE IS A DIATHERMY PAD

ANAESTHESIA - READ ON

General anaesthesia.

POSITION - READ ON

Supine.

Have access from costal margin to knees.

STANCE - READ ON

Stand on the side of the hernia, with your 1 assistant opposite.

For a bilateral operation, start on the side of the smaller hernia.

STEP

SKIN PREPARATION - READ ON

Use 2 swabs on sticks with 0.5% Chlorhexidine in 70% Propanol and 1 swab to dry off.

Clean the skin from the mid-thigh to the umbilicus including the scrotum, and from 5cm. beyond the midline to the middle of the iliac crest.

For a double herniotomy, clean from one iliac crest to the other.

TOWELLING UP - READ ON

PLACE A PAPER TOWEL UP
TO THE SCROTUM OR LABIA

14 PLACE A LOWER TOWEL UP
TO THE SCROTUM OR LABIA

15 PLACE AN UPPER TOWEL DOWN
TO THE ILIAC CREST

16 PLACE A LATERAL TOWEL TO
THE ANTERIOR SUPERIOR ILIAC SPINE

17 PLACE A MEDIAL TOWEL ON
THE MIDLINE
For a bilateral herniotomy, place the medial
towel on the opposite anterior superior iliac
spine.

18 FASTEN THE TOWELS TO THE SKIN
Use 4 towel clips.

For a bilateral operation, cover the opposite
side with a temporary dressing towel.

19 CHECK THE DIATHERMY IS WORKING

20 SKIN INCISION - READ ON
Use a Swan-Morton scalpel with a no.15 blade.

Beginners should incise from the pubic
tubercle to the mid inguinal point, to expose
the external oblique, external inguinal ring,
and the cord.

With experience, the incision can be reduced
to a 10mm. cut over the external inguinal
ring.

STEP
NUMBER
20 CONT An incision into the suprapubic skin crease
is rather too high for easy access to the
sac.

21 DEEPENING THE INCISION - READ ON
Use dissecting scissors.

Beginners should dissect carefully into
the subcutaneous fat to display the external
oblique, the external inguinal ring, and the
cord.

Coagulate and cut with scissors the
superficial epigastric vessels.

(With the smaller incision, the experienced
surgeon should dissect into the fat to find
directly, the slack, bluish tissue of the
inguinal sac. GO TO STEP ***
(FINDING THE SAC) )
22 EXPOSE THE EXTERNAL OBLIQUE APONEUROSIS
Use a gauze dissection to show the stripes of the aponeurosis.

23 INSERT A WEST'S SELF RETAINING RETRACTOR
Retract the skin and subcutaneous fat.

Place the handles facing your assistant.

24 EXPOSE THE EXTERNAL RING
Use a gauze swab.

The external ring should be in the centre of this incision.

See the soft tissues of the spermatic cord or round ligament running through the opening in the smooth external oblique aponeurosis.

If you cannot find the external ring, explore the external oblique more widely using a Langenbeck retractor or by enlarging the wound.

Check you are correctly orientated with the patient.

It is quite easy to get 90 degrees out of line.

STEP NUMBER 25 CONT THERE IS NO NEED TO OPEN THE EXTERNAL OBLIQUE

26 FINDING THE CORD OR ROUND LIGAMENT - READ ON
The spermatic cord or the round ligament run medially out of the external inguinal ring.

The dark blue of the pampiniform plexus identifies the spermatic cord, and the white 3mm. diameter round ligament is easy to identify.

Pull a 2cm. loop of the cord or round ligament out of the wound.

27 FINDING THE SAC - READ ON
Hold the cord or round ligament over your left index finger and dissect gently with a dissecting forcep.

Do not worry if the testis appears in the wound.

You will be able to replace the testis later.

The sac will be the indirect type, running down the cord superficial to the vas and
The sac is usually covered by some flimsy adventititia and a variable thin layer of brownish cremasteric muscle fibres.

Look for the bluish-white of the sac as it comes out of the external ring.

Look for the half-moon shape of the bottom of the sac crossing the longitudinal lines of the adventitia, cremaster, vas, cord vessels, or round ligament.

Remember, a complete sac running around the testis will not have this half-moon feature.

Pick through the adventititia to get a clearer view.

**IF YOU CANNOT FIND A SAC, deliver the testis to find:**

the sac,

a patent processus vaginalis,

**STEP**

**NUMBER**

27 CONT a retractile testis,

a hydrocele of the cord.

Consider opening the external oblique aponeurosis.

Call a more experienced surgeon.

**IF THERE REALLY IS NO SAC, NO FEMORAL HERNIA, AND NO OTHER PATHOLOGY**

GO TO STEP ** (WOUND CLOSURE)

28 **DISSECTING THE SAC – READ ON**

If the bottom of the sac is visible in the wound,

GO TO STEP ** (WOUND CLOSURE)

If the there is a COMPLETE sac running down out of sight into the scrotum, aim to include only the proximal part of the sac in the herniotomy.

Dissect round the back of the visible part of the sac in the wound.

Use a mosquito to dissect very delicately round the back of the thin peritoneum of the sac.

Avoid damage to the vas, which lies in contact with the peritoneum.
If you tear the sac proximally, control the tear temporarily with another mosquito.

Aim to free a 2cm. length of sac.

Take your time.

29 CLIP THE LENGTH OF FREED SAC
Use 1 mosquito.

30 CUT THE LENGTH OF FREED SAC
Use scissors to cut the sac 5mm. distal to the mosquito.

Let the distal sac drop back into the scrotum.

STEP
NUMBER
31 EXCISING THE SAC - READ ON

32 COMPLETE THE PROXIMAL DISSECTION OF THE SAC
Hold the bottom of the sac or the cut end of a complete sac with a mosquito.

Dissect very delicately with the end of a gauze swab held with a dissecting forcep.

Free the sac from the rest of the cord up to and inside the external ring.

Avoid damaging the vas which lies on the back of the sac.

If the sac splits, repair it with 3/0 Vicryl (Ethicon W9890).

33 EMPTY THE SAC
Rotate the mosquito forcep to empty the sac of contents such as omentum or bowel.

Check the vas does not get pulled up into the twisted sac.

34 TRANSFIX THE SAC
Use a transfixion stitch of 3/0 Vicryl (Ethicon W9890).

35 CUT THE SAC
Use dissecting scissors to cut the sac 10mm. from the transfixion stitch.

36 RELEASE THE TENSION ON THE TRANSFIXION STITCH
Check there is no bleeding when the tissues are relaxed.

37 CUT THE TRANSFIXION STITCH
Cut the stitch 10mm. from the knot.

The transfixed sac will disappear into the inguinal canal.

38 IF THE TESTIS IS IN THE BOTTOM OF THE SCROTUM GO TO STEP ** (WOUND CLOSURE)

39 IF THE TESTIS HAS PULLED UP INTO THE WOUND OR TO THE TOP OF THE SCROTUM Replace the testis by pushing down or by STEP NUMBER 39 CONT pulling on attachments between the testis and the scrotum.

If the testis will not reposition in the scrotum, or if there is any doubt about it staying there, PERFORM AN ORCHIDOPEXY - READ ON

40 BEGIN TO DISSECT THE CORD Use a dissecting forcep to break down the brown strands of the cremaster muscle, and greyish adventitial strands.

Take your time.

Avoid damaging the white vas, and blood vessels, particularly the blue pampiniform plexus.

As the strands are gently broken, the cord will lengthen.

Dissect non-important strands from the vas, and testicular vessels, and cut the strands with scissors.

41 FIXING THE TESTIS - READ ON

42 MAKING THE SUBDARTOS POUCH - READ ON

43 PASS A FINGER DOWN INTO THE SCROTUM Slide your opposite index finger through the inguinal wound into the space deep to the superficial fascia to the bottom of the scrotum.

This will open up a tunnel to receive the cord and testicle.

Keep your index finger in the scrotum and stretch the scrotal skin over it.

44 CUT THROUGH THE SKIN ONTO
YOUR FINGER END
Use the scalpel with a no.15 blade.

Cut through the skin and dartos muscle 1cm. long onto your finger.

STEP
NUMBER
44 CONT Avoid cutting your finger.

45 BURROW BETWEEN THE SKIN/DARTOS
AND THE SUBCUTANEOUS TISSUE
Use a mosquito forcep in your opposite hand.

Make a space big enough to contain the testis, epididymis and gubernaculum.

Make sure that the space will be over adequate.

Once the testis has been pulled down into the scrotum, it will be very difficult to get it out to enlarge the subdartos pouch without damaging the retaining tissue.

Damage to the subcutaneous layer can lead to the testis riding out of the scrotum.

Keep your index finger in the scrotum from the inguinal incision during the whole of this dissection.

This will keep the subcutaneous tissue tense over your finger to allow easy dissection.

46 BRINGING DOWN THE TESTIS - READ ON
Keep your finger pushing the subcutaneous layer down through the scrotal wound.

Through the scrotal wound, push the point of a mosquito onto the tip of your index finger with the subcutaneous layer in between.

With the mosquito pressing firmly on your index finger, push the mosquito right up into the inguinal incision.

Push the mosquito tip 1cm. through the subcutaneous layer to make a 5mm hole in the layer.

This hole will be just big enough to eventually contain the spermatic cord, but not big enough to allow the testis to ride up.

Check the testis will lie loosely in the scrotum.

If not, free off the cord more.
STEP
NUMBER
47 CHECK THE CORD IS NOT ROTATED

48 GRASP THE TESTIS
Use the mosquito which is pushing up from the scrotum.

Clip the mosquito onto the lowest part of the testis or onto the gubernaculum tissue.

Avoid the epididymis.

49 PULL THE TESTIS DOWN INTO
THE SCROTUM
Pull the testis carefully through the subcutaneous layer.

You may need to help the testis through the 5mm. hole in the layer using dissecting forceps to stretch the opening, but not to tear the opening.

50 TUCK THE TESTIS INTO
THE SUBDARTOS POUCH
Use dissecting forceps.

Check the cord does not rotate.

If the testis will not fit, you are faced with a very difficult dissection in the scrotum to enlarge the subdartos pouch with your view obscured by the testis.

51 SCROTAL CLOSURE - READ ON
Use interrupted 3/0 catgut (Ethicon W480).

If the retaining subcutaneous layer is damaged, tether the testis to the bottom of the scrotum by inclusion in these skin stitches.

52 CHECK THAT THE TESTIS IS
IN THE BOTTOM OF THE SCROTUM

53 WOUND CLOSURE - READ ON

54 RETURN TO THE INGUINAL WOUND

55 CHECK THERE IS NO BLEEDING

56 CHECK THE SWAB, NEEDLE, AND INSTRUMENT COUNTS
STEP
NUMBER
57 CLOSE THE SUBCUTANEOUS FAT
Use continuous 2/0 Vicryl (Ethicon W9136).
58 SKIN CLOSURE - READ ON
Use continuous 3/0 Vicryl (Ethicon W9890).

59 INFILTRATE THE INGUINAL
WOUND WITH BUPIVCAINE
Use 0.25% plain Bupivacaine at 2mg. per kilogram.

This dose will allow you to infiltrate both wounds of a bilateral operation.

60 SPRAY THE WOUND(S)
Use an acrylic spray (Nobecutane).

61 RECHECK THE SWAB, NEEDLE
AND INSTRUMENT COUNTS

62 FOR A BILATERAL HERNIOTOMY

Change gloves.
Put the diathermy pedal on the opposite side.
Change places with your assistant.
Remove the temporary dressing towel.
Clean the second side with 1 application of Chlorhexidine in Propanol.
GO BACK TO STEP 20 (SKIN INCISION)

63 SPRAY THE WOUND
Use an acrylic spray (Nobecutane).

64 APPLY AN ADHESIVE DRESSING
Primapore.
Gauze and elastic net pants to any scrotal wound.

65 FINAL TOUCHES - READ ON

66 CHECK A PATIENT UNDER TWO YEARS
IS KEPT SPECIALLY WARM
Use the warmed blankets.

STEP
NUMBER
67 WRITE LEGIBLE OPERATION
DETAILS

68 FILL IN THE SURGICAL
AUDIT FORM

69 DICTATE AN OPERATION LETTER
TO THE GENERAL PRACTITIONER
PLUS
A COPY TO THE REFERRING PHYSICIAN
STEP NUMBER
70  EQUIPMENT AND MATERIALS
(FRIARAGE HOSPITAL)
EQ-CHIH)          MR EDWARDS 12/91   CHILD HERNIOTOMY

BASIC PACK
MINOR

INSTRUMENTS

10 CURVED MOSQUITOS     3 SPONGE HOLDERS
1 WEST S.R. RETRACTORS  4 TOWEL CLIPS
2 LARGE LANGENBECKS    2 X ACTION TOWEL CLIPS
2 SMALL LANGENBECKS    10 CURVED JOLL FORCEPS
1 SMALL NEEDLE HOLDERS NO 3 KNIFE HANDLE
1 NON TOOTHED DISSECTING FORCEPS 1 MCINDOES SCISSORS
1 FINE NON TOOTHED DISSECTING FORCEPS 1 ASSISTANTS SCISSORS
PREPARATION  HIBITANE 2 X WET, 1 X DRY.

SUTURES            NO MATERIAL

TIES
TRANSFIXION  1 X W9136  2/0 VICRYL
CLOSURE
FAT          1 X W9136  2/0 VICRYL
SKIN         1 X W9890  3/0 VICRYL
1 X W480   4/0 CATGUT
OTHER

BLADES       1 X 15

DIATHERMY     MONOPOLAR, FLEX, HOLDER, MEDIUM FORCEPS

DRAINS

PATIENT'S SUPINE
POSITION

WOUND
INfiltration 10ML. 0.25% BUPIVACAINE (MARCAINE)
1 X 10 ML. SYRINGE
1 X 21SWG GREEN NEEDLE

SPRAYS       NOBECUTAINE

DRESSINGS PRIMAPORE
DRESSING GAUZE

ADDITIONAL ITEMS
ELASTIC NET PANTS

STEP
NUMBER
71 EQUIPMENT AND MATERIALS LIST
(DARLINGTON MEMORIAL HOSPITAL)