

OPERATIVE SURGERY

Fundamental International Techniques

Paediatric Surgery

THIRD EDITION

Edited by

H. Homewood Nixon

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Paediatric Surgery

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Butterworth & Co (Canada) Ltd
Toronto: 2265 Midland Avenue, Scarborough, Ontario M1P 4S1

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Boston: 19 Cummings Park, Woburn, Mass. 01801

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First Edition Published in Eight Volumes, 1956-1958
Second Edition Published in Fourteen Volumes, 1968-1971
Third Edition Published in Eighteen Volumes, 1976-1978

©
Butterworth & Co (Publishers) Ltd
1978

ISBN 0 407 00634 6

British Library Cataloguing in Publication Data

Operative surgery. — 3rd ed
Paediatric surgery
1. Surgery, Operative
I. Rob, Charles II. Smith, Sir Rodney
III. Dudley, Hugh Arnold Freeman IV. Nixon,
Harold Homewood
617'.91 RD32 78-40046
ISBN 0-407-00634-6

Typeset by Butterworths Litho Preparation Department
Printed in England by The Whitefriars Press Ltd., London and Tonbridge
Bound by the Newdigate Press Ltd., Dorking, Surrey

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Inguinal Hernia and Hydrocele in Children

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PRE - OPERATIVE

Indications

There is no place for the conservative management of an inguinal hernia in either infancy or childhood as the highest incidence of incarceration is within the first 3 months of life. Premature infants are specially at risk. Incarceration may result in strangulation of the intestine in the male or of the ovary and Fallopian tube in the female; testicular atrophy may be a late sequelae of incarceration (Stephens, 1963).

In patients with a unilateral inguinal hernia there is an increased risk of developing a hernia on the contralateral side (right inguinal hernia — 33 per cent; left inguinal hernia — 66 per cent). Despite the increased risk of developing a contralateral hernia routine exploration of both sides is not recommended (De Boer and Potts, 1963).

Anaesthesia

General anaesthesia is required and the operation is suitable for day care at all ages (Atwell *et al.*, 1973), thus avoiding many of the upsets caused by an in-patient admission with separation of the child from the family.

Principles of the operation.

Inguinal herniotomy is the treatment of choice as the hernia is due to congenital persistence of the processus vaginalis. In the female infant with a sliding hernia of the ovary and Fallopian tube and in inguinal hernias associated with spina bifida and exstrophy of the bladder, secondary factors are of aetiological significance and a repair of the hernia may be required.

THE OPERATIONS

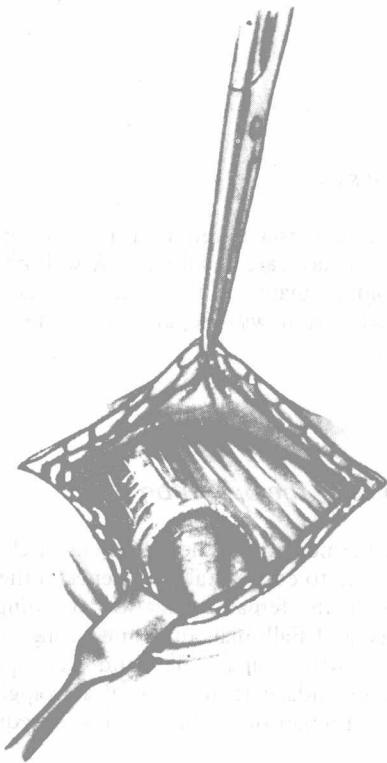
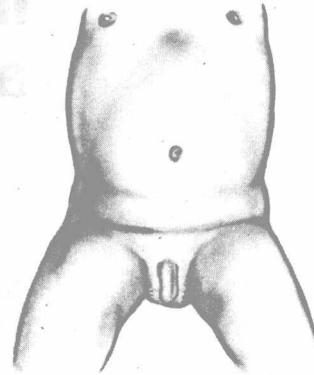
Minor differences of technique are used depending upon the age and sex of the patient and therefore the operations are considered under four sub-headings: (1) male infant or child under 2 years of age; (2) male child over 2 years of age; (3) female infant or child; (4) surgical treatment of a hydrocele.

INGUINAL HERNIOTOMY IN THE MALE INFANT OR CHILD UNDER 2 YEARS

1

The incision

A skin-crease incision in the fold of the skin above the external inguinal ring gives adequate access. An oblique incision should be avoided.



2

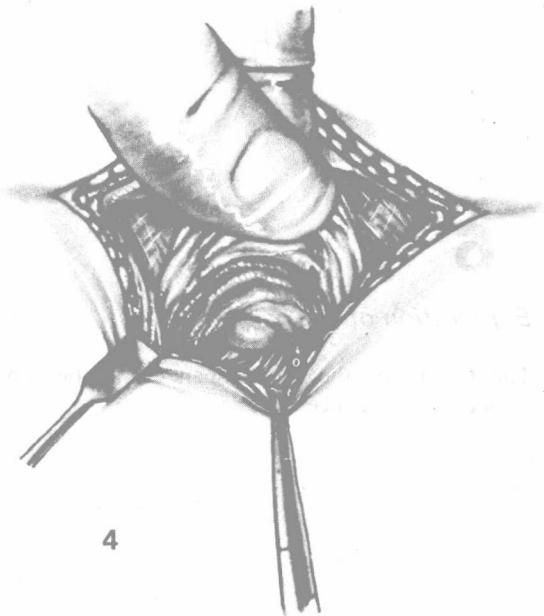
Exposure of the spermatic cord and the external inguinal ring

Haemostats are placed on the subcutaneous tissue and lifted thus allowing the subcutaneous tissues to be cut with dissecting scissors. Blunt dissection in this manner along the line of the spermatic cord is used until the cord is seen emerging from the external ring. This may be difficult in the small infant as the incision is sited above the external ring but the cord is easily recognized by its glistening appearance.

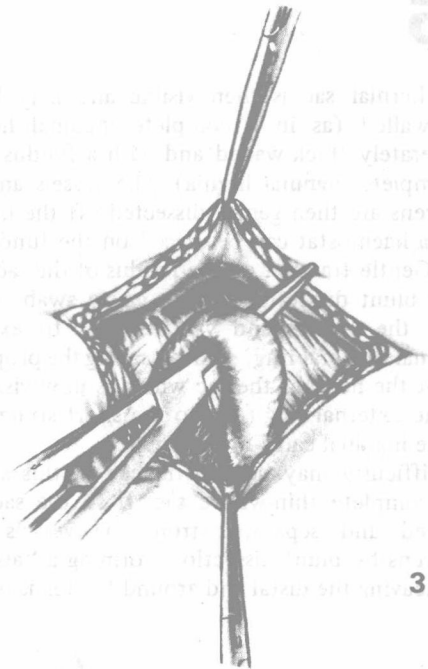
3

Mobilization of the spermatic cord

Once identified the cord may be mobilized to allow later dissection of the cord structures. Isolation of the cord is often easier if a haemostat is passed behind the cord and then clipped to the edge of the operation towels.



4



3

Isolation and separation of the sac

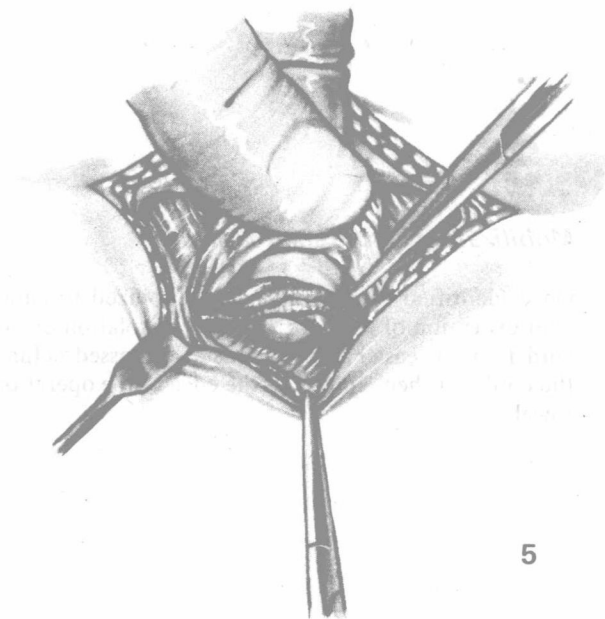
4

In many infants the cremaster derived from the internal oblique is a well defined layer of hypertrophied muscle fibres and can be separated along the length of the cord by blunt dissection with fine dissecting forceps. This procedure is easier if the cord is held on the stretch between the thumb and first finger.

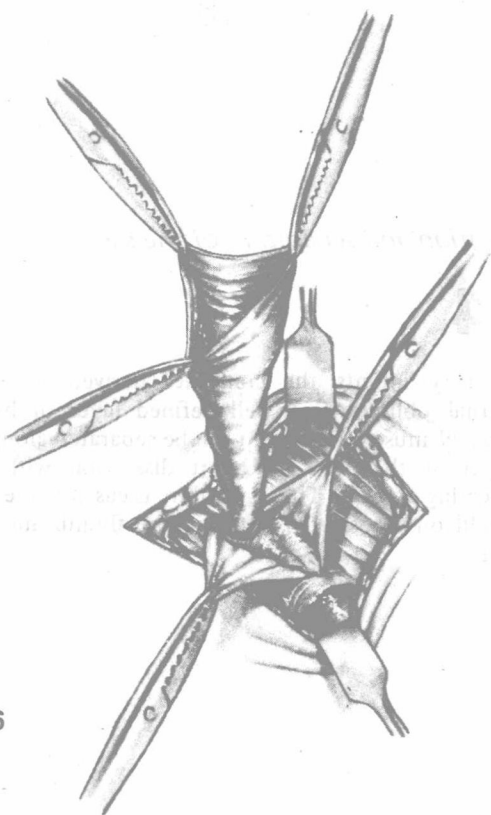
5

The hernial sac is then visible and may be either thin-walled (as in a complete inguinal hernia) or moderately thick-walled and with a fundus (as in an incomplete inguinal hernia). The vessels and the vas deferens are then gently dissected off the hernial sac and a haemostat can be placed on the fundus of the sac. Gentle traction on the fundus of the sac together with blunt dissection with a gauze swab or pledget frees the vessels and vas deferens to expose the internal inguinal ring, demonstrating the properitoneal fat at the neck of the sac which is now visible distal to the external ring (due to the short straight course of the inguinal canal in the infant).

Difficulty may be experienced at this stage with the complete thin-walled sac. If so the sac may be opened and separated from the vessels and vas deferens by blunt dissection, forming a 'false fundus' and leaving the distal end around the testis *in situ*.



5



6

6

Exploration of the hernial sac

The fundus of the sac is opened and the contents inspected and reduced.