

# Recent Advances in **ORTHOPAEDICS**

EDITED BY  
**B. McKIBBIN**



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**NUMBER FOUR**

CHURCHILL LIVINGSTONE  
Medical Division, Harcourt Health Sciences

Published in the United States of America by  
Churchill Livingstone Inc., 395 Broadway, New York  
NY 10013, and by associated companies, branches  
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publisher, Churchill Livingstone, Robert Stevenson  
House, 1-7 Baxter's Place, Leith Walk,  
Edinburgh EH1 3AF.

First published 1983

ISBN 0 443 06017 0  
Library of Congress # 83-014

Library of Congress Catalogue



**CHURCHILL LIVINGSTONE**  
**EDINBURGH LONDON MELBOURNE AND NEW YORK 1983**

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Medical Division of Longman Group Limited

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First published 1983

ISBN 0 443 02627 0  
ISSN 0308-4914

Library of Congress Cataloging Card Number: 79-40019

Printed in Great Britain at The Pitman Press, Bath

# Preface

In previous volumes in this series the Preface has largely been given over to the semantic problem of reconciling the title with the contents and that need is no less in this present volume.

Both the terms 'Recent' and 'Advance' are relative and their assignment therefore depends on individual judgement. However, editorial policy has been based on the perception that by any reasonable definition there are in fact very few subjects which qualify under both headings and therefore one has been deemed sufficient provided that the topic is one of current interest to orthopaedic surgeons.

The topic of knee replacement can scarcely be regarded as 'recent' in terms of the speed of present developments in the speciality, but an appraisal of the extent to which it represents an 'advance' was thought timely and these considerations apply to several other topics. Conversely the various uses of carbon fibre are undoubtedly recent and hopefully therefore of interest, but an estimate of their ultimate usefulness, if any, lies many years ahead. Other articles lie in a somewhat intermediary position and the reader may decide for himself under which heading they best qualify, although in some instances the individual authors have given their own opinions.

As before, an attempt has been made to cover as wide a variety of topics as possible and to make the contributions as worldwide as could be. Although the balance, this time, has come out weighted more heavily in favour of Europe and North America than in previous editions this is quite fortuitous.

Once more the Editor would like to thank all the contributors for their patience and forbearance. All are busy men and their success in meeting the various deadlines varied. It is unfortunate that the punctual are punished by the delays of the more dilatory in that their contributions are not so recent as they otherwise might have been, but such problems are unfortunately inseparable from a venture such as this.

Cardiff, 1983

B. McK.

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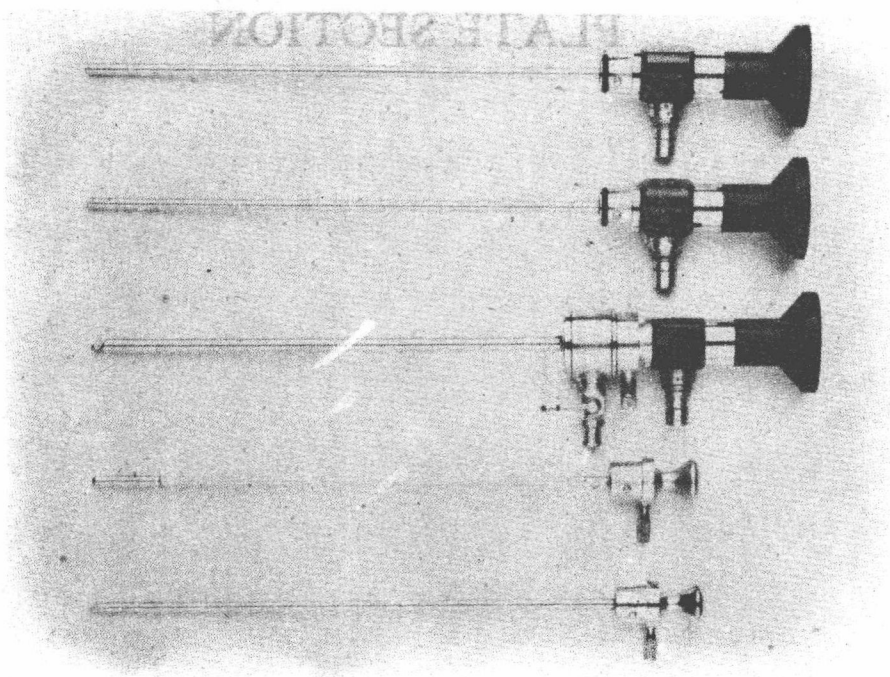


# PLATE SECTION

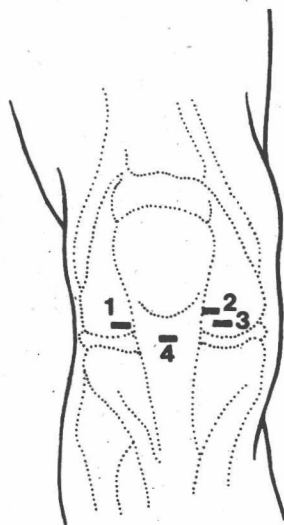
Plate 1. A series of photographs showing the development of the embryo of the American mink (Mustela vison) from the first cleavage to the formation of the tail. The photographs are arranged in a vertical column, showing the progression of the embryo from a single cell to a fully formed tail.



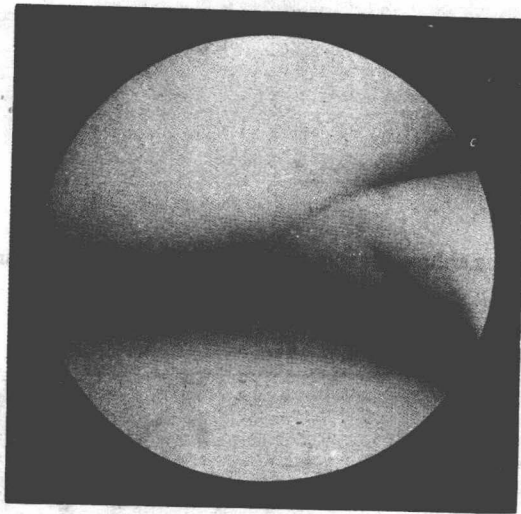
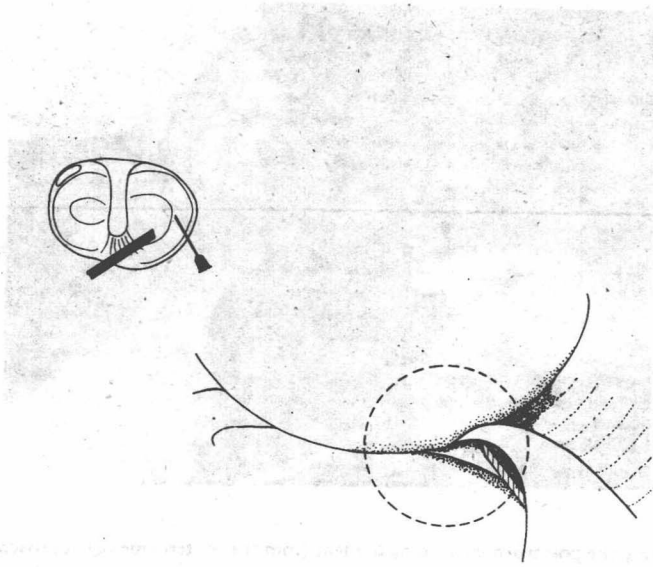
Figure 1. A series of photographs showing the development of the embryo of the American mink (Mustela vison) from the first cleavage to the formation of the tail. The photographs are arranged in a vertical column, showing the progression of the embryo from a single cell to a fully formed tail.



**Plate 5.1** A set of arthroscopes. From above downwards; 0° telescope, 30° telescope, 70° telescope in sheath, blunt obturator and sharp trochar.



**Plate 5.2** Site of insertion of the arthroscope. (1) Antero-lateral approach. (2) Antero-medial approach. (3) Lower and more medial point of insertion for approaching the posterior horn of the medial meniscus with operating instruments. (4) Central approach.

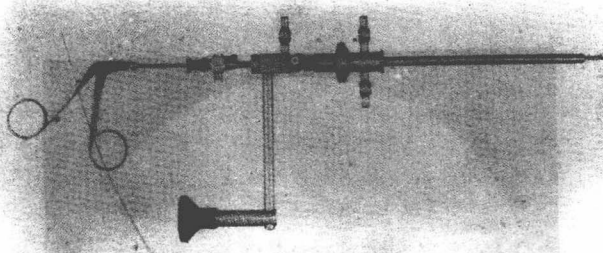


**Plate 5.3** Lifting the medial meniscus with a percutaneous joint line needle to expose its under-surface and the inferior coronary ligament.

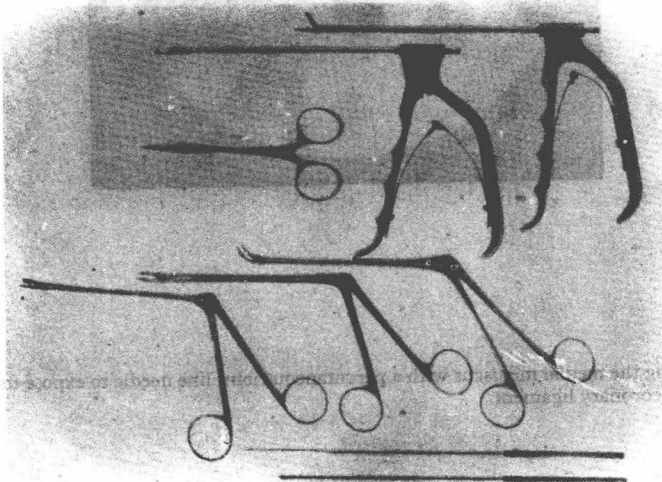




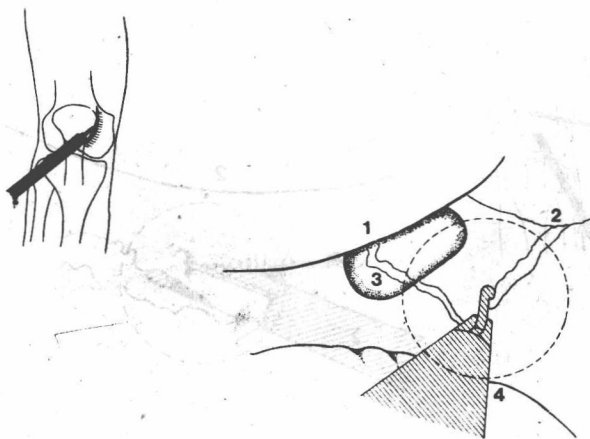
**Plate 5.4** Examining the postero-medial compartment from the postero-medial approach.



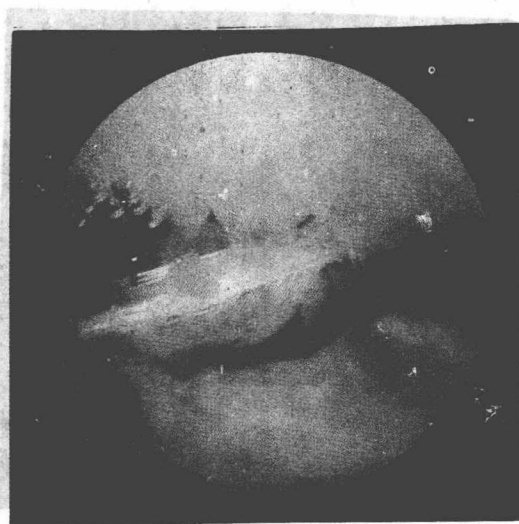
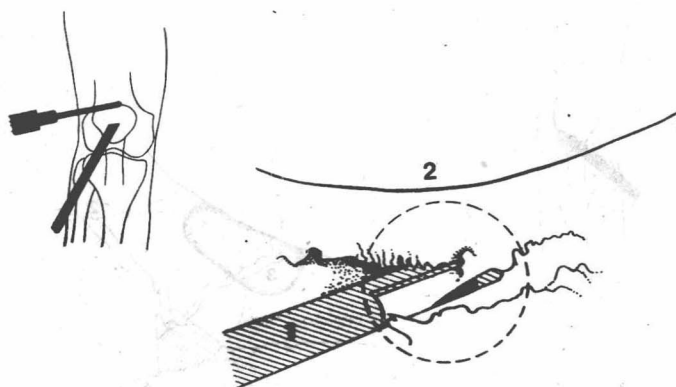
**Plate 5.5** The Wolf operating arthroscope with the scissors in the instrument channel.



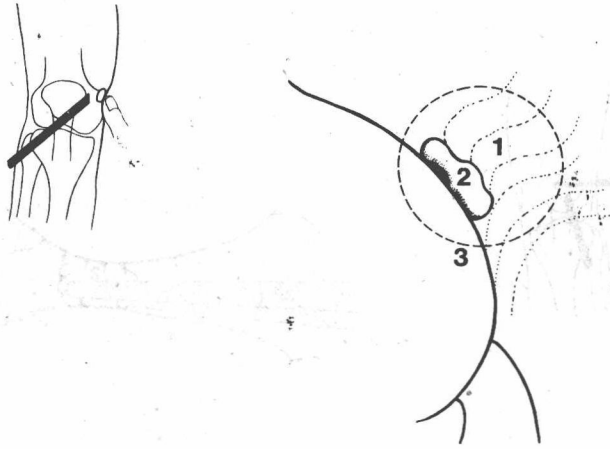
**Plate 5.6** Basic set of simple instruments for the double puncture technique. From above downwards; arthroscopic scissors, guillotine, artery forceps with screw joint, Northfield's curved pituitary rongeurs, Cushing's straight pituitary rongeurs with 4 mm bite, punch forceps, hook and knife.



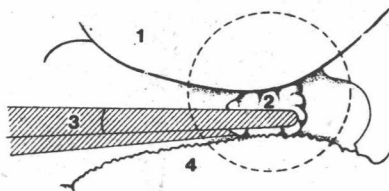
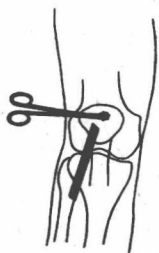
**Plate 5.7** Excision of the medial synovial shelf using an operating arthroscope, (1) patella, (2) cut edge of synovium, (3) air bubble, (4) anterior surface of femur.



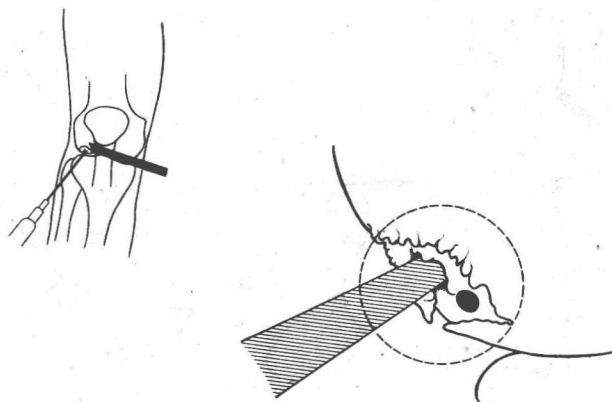
**Plate 5.8** Performing a synovectomy using a powered shaver (1), patella (2).



**Plate 5.9** A loose body (2) is prevented from slipping from the suprapatellar pouch into the medial gutter by external finger pressure applied to the medial wall of the knee (1)-(3) medial femoral condyle.

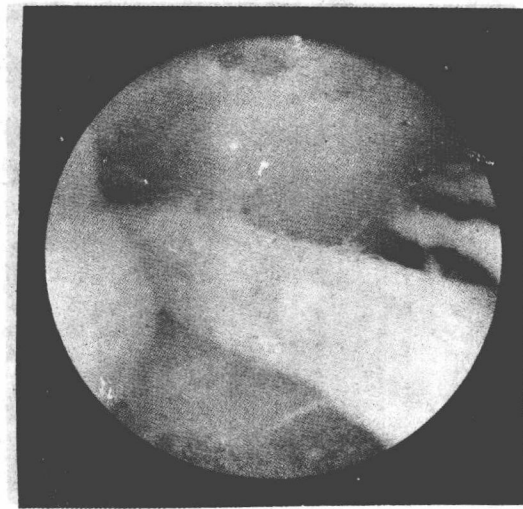
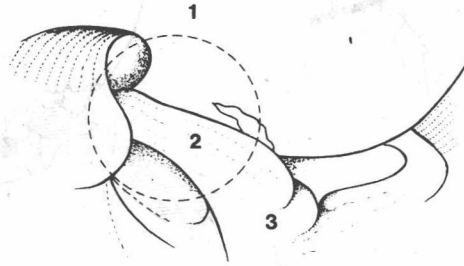
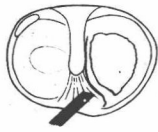


**Plate 5.10** A loose body (2) is grasped in Kocher's forceps (3) inserted from the lateral suprapatellar route; (1) patella, (4) anterior surface of femur.

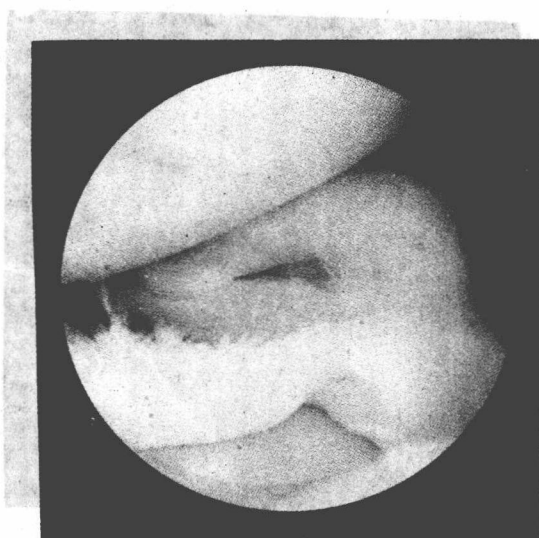
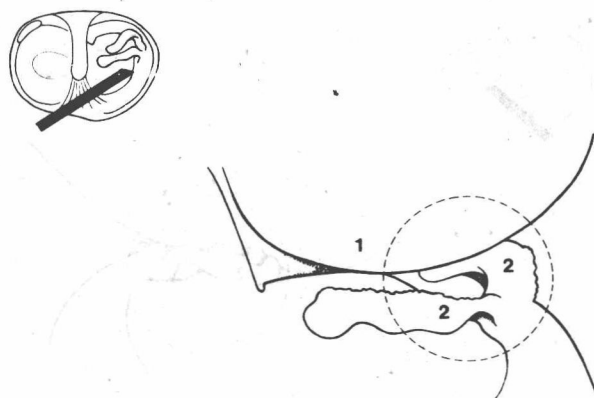


**Plate 5.11** Drilling the subchondral bed of a full thickness chondral fracture of the lateral femoral condyle with a thick Kirschner wire.

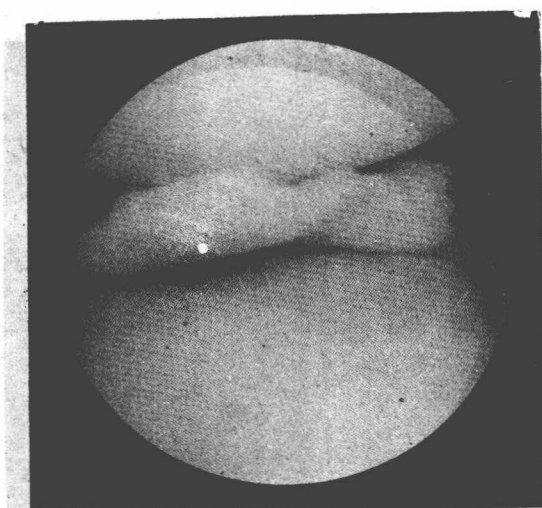
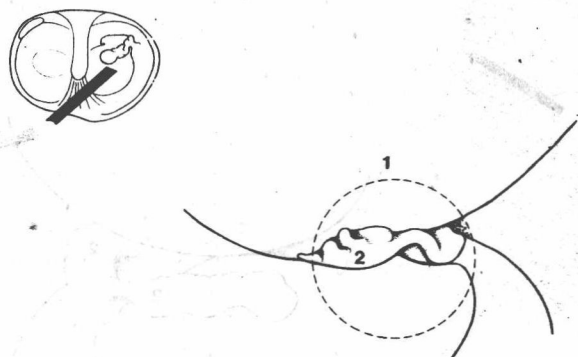




**Plate 5.12** A complete (type 1) bucket handle tear of the medial meniscus (2) lying locked in the intercondylar notch beneath the medial femoral condyle (1). The anterior attachment of the fragment (3) is at the anterior horn of the medial meniscus.



**Plate 5.13** Two detached bucket handle fragments of medial meniscus (2) lying in the medial compartment beneath the medial femoral condyle.



**Plate 5.14** A flap of medial meniscus (2) manipulated from beneath the medial femoral condyle (1) by a valgus and external rotation force.