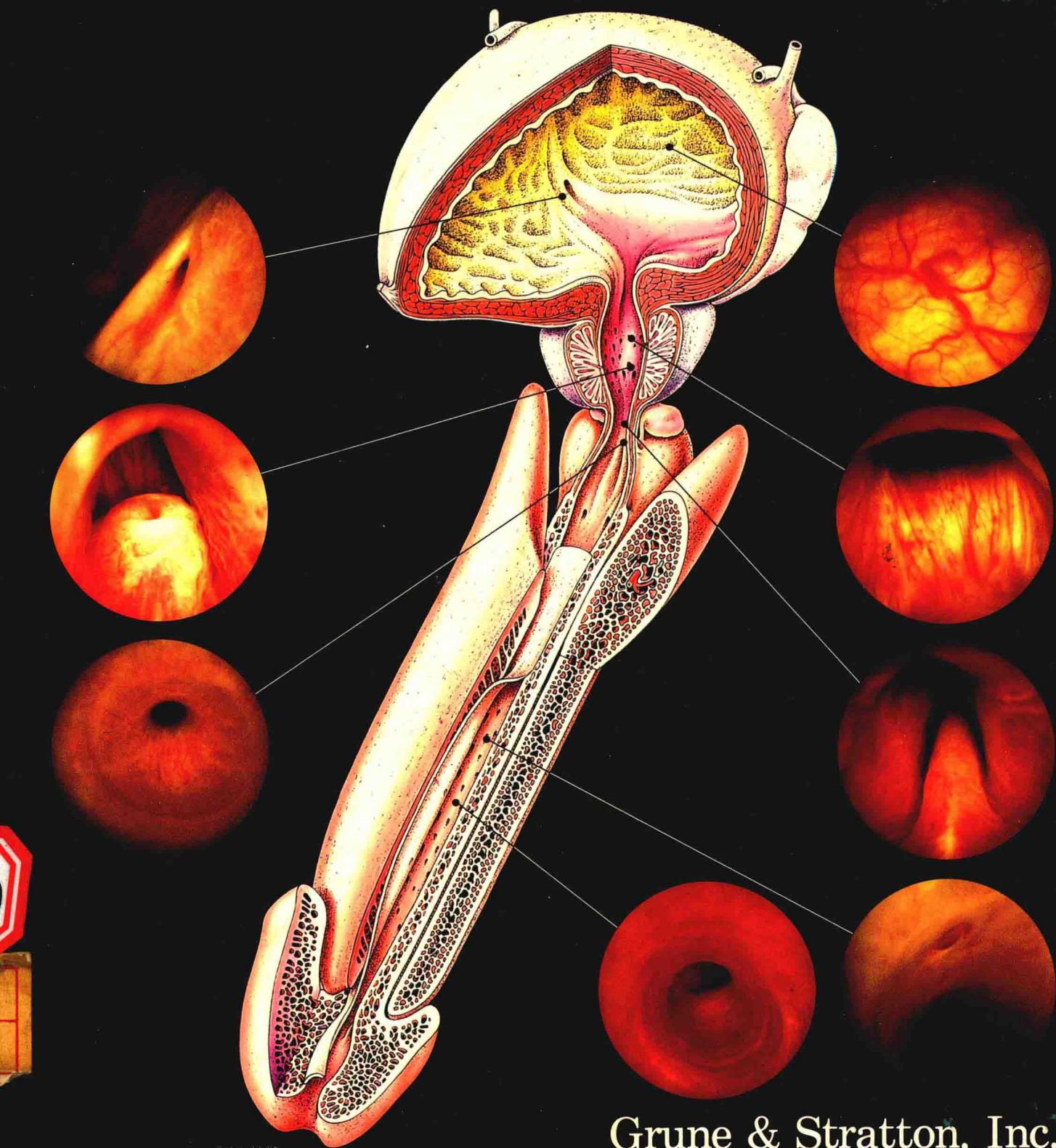


Atlas of Cystoscopy

Jan Schönebeck



Grune & Stratton, Inc.

Atlas of Cystoscopy

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**No Aladdin's cave was ever so beautiful or so full
of surprises as the human bladder.**

John Blandy.

*To
Ingela, Caroline and Charlotte*

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Foreword

It is an honor to write a foreword to Jan Schönebeck's Atlas of Cystoscopy. Long ago I decided that there are only two kinds of people in Medicine; those who are careful and attentive to details, and those who are not. Dr. Schönebeck is a charter member of the first group. His earlier work on funguria is a urologic classic, and those who read the fifth edition of Campbell's Urology will happily re-discover his scholarly presentation on this subject.

The cornerstone of this Atlas of Cystoscopy is Dr. Schönebeck's attention to detail. The pictures reproduce the endoscopic image flawlessly, and the topics have been carefully chosen. I have had on my desk for many years the 1925-edition of E. Canny Ryall's Operative Cystoscopy (C.V. Mosby, St. Louis) with the magnificent original colored plates drawn by Mr. Thorton Shiells. Some readers may be interested to compare this classic with its hand-drawn illustrations to Dr. Jan Schönebeck's modern photographic portrayal of endoscopy published over half-a-century later.

Endoscopy of the urinary tract is what distinguishes our specialty from all others. This splendid Atlas of Cystoscopy emphasizes that distinction. Medical students and residents in training will have a much better perspective of Urology because of this Atlas. Urologists will be better endoscopists because of it.


Thomas A. Stamey, M.D.
Stanford, California - 1984

Preface

Cystoscopy is one of the cornerstones of urological diagnosis. It is by no means an easy examination - only practice, practice and more practice can make perfect. It takes many hundreds of cystoscopic examinations for the practitioner to learn first to see and then to interpret what he sees, and, most difficult of all, to decide whether a bladder is cystoscopically normal.

It was not intended that this book should be a complete textbook of cystoscopy, still less of transurethral surgery, but it contains many practical tips. While the text is intentionally concise, the book is rich in photographs and illustrations depicting the most frequent findings from cystoscopic examinations in adults and some common transurethral surgical methods of treatment. A few short case histories are presented, supplemented by radiographic and histological findings where these lend an extra dimension to the information deriving from cystoscopy.

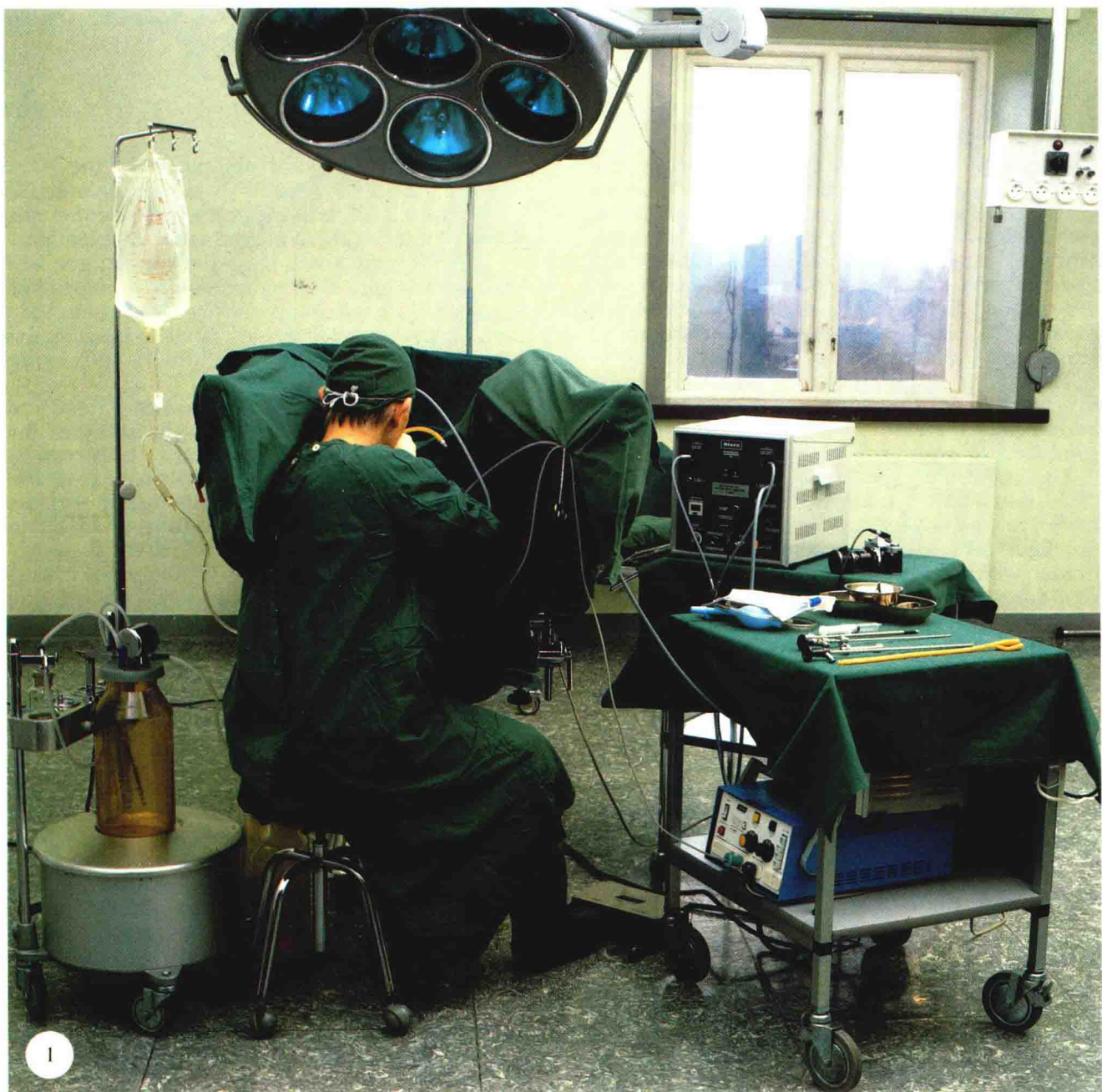
The urologist at a medium-sized hospital will not, except perhaps over an exceptionally long period, have the opportunity to see all possible changes in the urinary bladder. This atlas is therefore not complete; some interesting findings such as endometriosis and adenocarcinoma of the bladder wall are not illustrated. Still more findings would have been missing had not benevolent colleagues helped me. In this respect I especially wish to thank Professor Ghoneim, Mansoura, Egypt, and my colleagues E. Varenhorst and L. Huldt. My sincere thanks are also due to Pontus Myrberg of Stille Werner, Stockholm, who supplied me with instruments.

Finally an important note: Right and left are always seen from the point of view of the patient. Thus if a tumour is said to be growing on the left side, this means the left side of the patient.

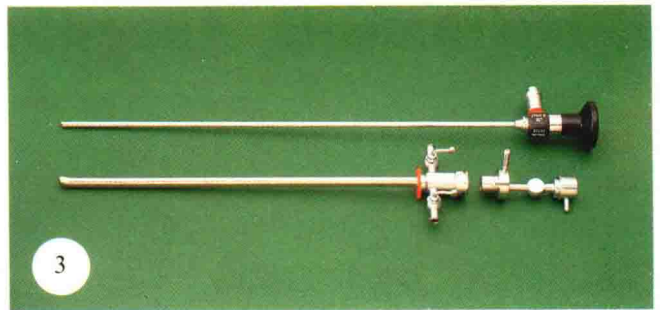


Jan Schönebeck

I. Instruments, Anaesthesia and Procedure



1



Instruments

The instruments used today for cystoscopy and transurethral surgery are complex, and it takes a long time to master their use. On the other hand, technical advances have meant that the cystoscopic investigation itself has become easier, and that the indications for transurethral surgery (in experienced hands) have become much wider. Most significant have been the improvements in lenses and illumination.

The author's primary experience is with Storz instruments, but the principles laid down in this book are in the main also valid for instruments produced by other manufacturers.

The cystoscopy equipment consists of five main parts: the cystoscope tube, the telescope inclusive of the lens and light conduction lead, the light cable, the light source and the fluid holder with a hose for connection to the cystoscope.

The diameter of the cystoscope varies from 8 to 23.5 Charrière (Ch; 1 Ch = 1/3 mm). The smallest is used in paediatrics. In adults, 17 - 21 Ch tubes are commonly used. Clearly, the specialist must have the whole spectrum available, while the less actively engaged are best served by the 19 Ch size - the smallest which allows minor transurethral procedures, placing of catheters, minor coagulations and the taking of biopsy specimens. This is also the size which I use routinely.

Telescopes

Four telescopes are available, all with a diameter of 4.0 mm. They are named after the angle which the lens (the visual field) takes in relationship to the long axis of the telescope as shown in Fig. 1.4. Thus illumination and visualisation of a field in the direct line of the cystoscope is achieved with the 0° telescope (straight forward); the 30° tele-

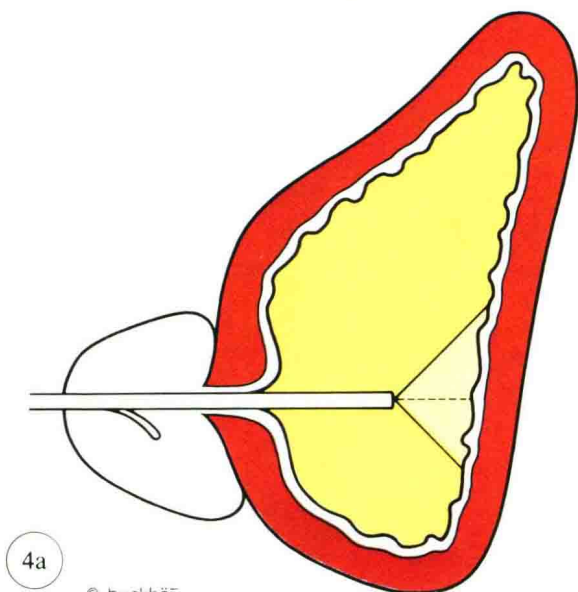
scope gives a forward oblique view, the 70° a lateral view and the 120° a retrograde view. In practice the 30° and 70° telescopes are the most used, but the others are valuable supplements.

The 0° optic gives, then, the view in line with the cystoscope. This is advantageous in urethroscopy but in cystoscopy the instrument has to be angled extremely to cover the whole bladder, and a comprehensive study with the 0° optic is impossible in men.

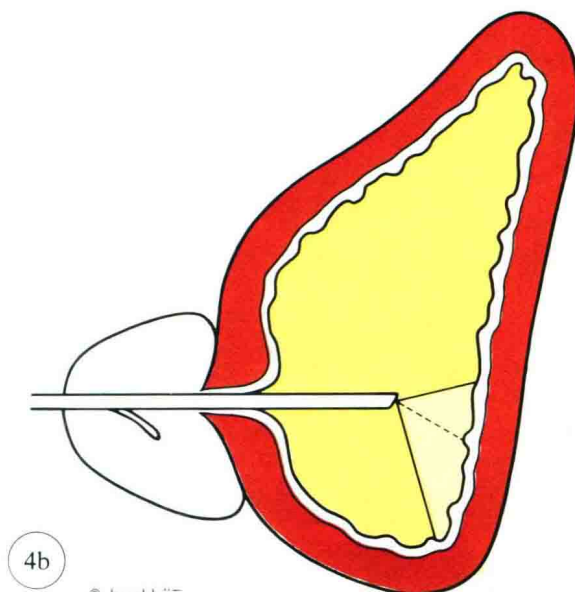
The female urethra is short not very fixed and relatively elastic which makes the study of the bladder easier, and the 30° optic which reduces the necessary angling of the cystoscope (Fig. 1.4) is sufficient for routine examination in women. By contrast the male urethra is long, and fixed in its proximal portion. The 30° optic is consequently inadequate and the 70° telescope is used routinely. Even so, there is a so-called blind spot (Fig. 1.5) just above the internal urethral orifice. It is relatively seldom that pathological changes occur at this site, but nothing must be overlooked and the area can and should, when necessary, be visualised with the 120° optic (Fig. 1.4d).

Instruments for transurethral surgery are matched to different optics - sometimes to more than one. Thus the rigid forceps (Fig. X.53) and the stone-punch (Fig. VIII.19) can be used with both 0° and 30° telescopes. Some resectoscopes require the straight forward (0°) telescope. At least in Sweden the 30° telescope resectoscopes are by far the most commonly used.

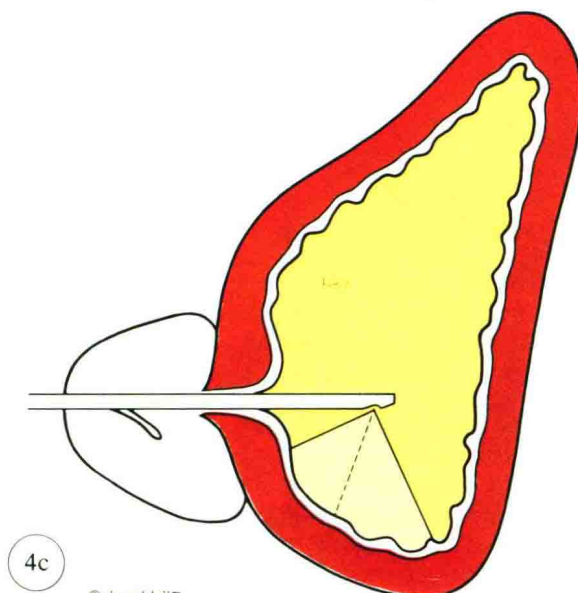
Summarising, the 30° telescope is used (a) for transurethral surgery and (b) for cystoscopy in women and urethroscopy in men. The 70° telescope is used for cystoscopy in men. The 0° and 120° telescopes are valuable supplements, the former for urethroscopy and the latter for visualising the blind spot.



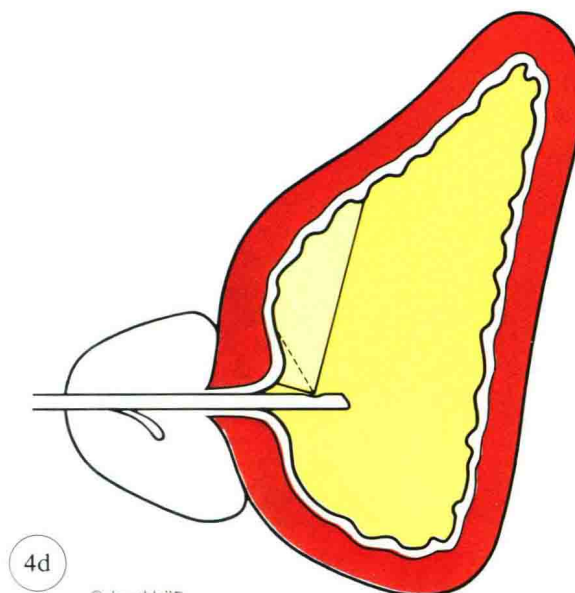
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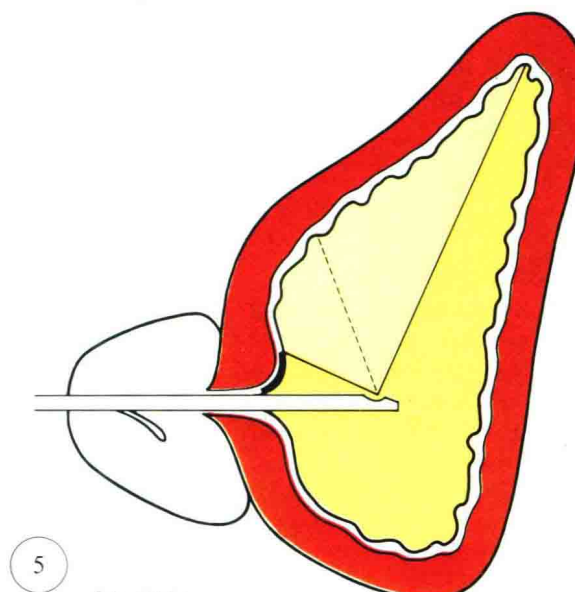
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- 1.1. The author in the operating theatre.
 1.2. The photographic equipment should always be easily available.
 1.3. The cystoscope consists of three parts: the tube, the telescope and the intermediate connection. It is most important not to forget the latter, see Fig. 1. 6.
 1.4a-d. The visual fields of the four telescopes.
 1.5. Blind spot (black area) in the male bladder if the 70° telescope is used.