

Experience with the Rigid Cysto-urethroscope: A Multicentre Review in Anambra State, South-East Nigeria.

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SUMMARY

Background: Cysto-urethroscopy or cystoscopy is an important tool for the practicing urologist for both therapeutic and diagnostic purposes. The indications for cystoscopy vary widely from centre to centre. We describe our experience with this tool.

Materials and Methods: We reviewed retrospectively the medical records of patients who had rigid cystoscopy at the Nnamdi Azikiwe University Teaching Hospital, Nnewi, Symbol specialist hospital, Nnewi and Borromeo specialist hospital Onitsha, all in Anambra State, Southeast, Nigeria in the period January 2004 to December 2009. All indications were as reported in the initial diagnosis for all the patients.

Results: A total of one hundred and eleven patients had cystoscopy during the study period. Most of the patients who had cystoscopy were in the seventh (43.3%) and fifth (23.4%) decades of life. The male to female ratio was 2:1. The commonest indication for cystoscopy was for investigation of bladder tumors in 50 (45.0%) of the patients. Other indications were for the investigation of hematuria in 31 (28.0%) patients, hydronephrosis in 13 (11.8%), urethral stricture 9 (8.1%), cystitis 2 (1.8%), bladder calculi 3 (2.7%), prostatitis 1 (0.9%), bladder fistula 1 (0.9%), and urinary incontinence 1 (0.9%).

Conclusion: The indications for Cystoscopy vary from centre to centre. In our experience, the most common indication is for bladder tumors. The procedure is well tolerated by patients with a low incidence of morbidity. Studies have shown that the flexible cystoscope offers more advantage in that it is less invasive and can be done under local anaesthesia.

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INTRODUCTION

The concept of cysto-urethroscopy or cystoscopy has long been an important tool for the practicing urologist for both

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therapeutic and diagnostic purposes¹. Since the early days of medicine, physicians have sought ways of looking into the living human body. It was not until 1807 that Philipp Bozzini invented an instrument known as the *Lichtleiter* that was to be the ancestor of the modern endoscope². However, it was not until 1878, that the true lower urinary tract endoscope was born with the development of the first working cystoscope by Nitze^{2,3}. The contributions of Hopkins² and Marshall² at the turn of the twentieth century to the development of the rod lens system and fibre-optic system respectively have also improved the results of endo-photography and reduced the invasiveness of the endoscopic procedures. Despite its advantages, the flexible fibre-optic cystoscope has not decreased the place of the rigid cystoscope.

The indications for cystoscopy vary widely from centre to centre, depending on the facility that is available (flexible or rigid), and depending on the common pathologies peculiar to the area, as well as the skill that is available.

In the centres reviewed the rigid cystoscope was used in all the patients with minimal complications. We reviewed the experience with this instrument in these centres over the past five years.

PATIENTS AND METHODS.

We reviewed retrospectively the medical records of patients who had rigid cystoscopy at the Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Symbol Specialist hospital (SSH), Nnewi, and Borromeo Specialist hospital (BHO), Onitsha, all in Anambra State, Southeast, Nigeria in the period January 2004 to December 2009. These centres were chosen because they are known to carry out urologic endoscopic procedures. The results were analyzed for age, sex, indication for cystoscopy and the presence or absence of complications. All indications were as reported in the initial diagnosis for all the patients. The results are presented in simple descriptive forms and tables.

RESULTS

A total one hundred and eleven patients had cystoscopy during the study period. Forty-nine patients (44.1%) had cystoscopy in NAUTH, while 42 (37.9%) and 20 (18.0%) had cystoscopy in SSH and BHO respectively. Forty eight (43.3%) and 26 (23.4%) were in the age range of 60-69 years and 40-49 years respectively. These represented the age groups with the highest indications for cystoscopy. There were 74 (66.7%)

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males and 37(33.3%) females with a male to female ratio of 2:1.

The commonest indication for cystoscopy was for investigation of bladder tumors in 50(45.0%) of the patients. Other indications were hematuria in 31(28.0%) patients and hydronephrosis in 13(11.8%) of the patients. (Table 1). Documentation on complications following the procedure was scanty, the only documented complications were hematuria in 5(4.5%), pain in 5 (4.5%) and acute retention 9(8.1%) of the patients.

Table 1: Distribution of indications for patients that had rigid Cystoscopy.

Indications	No. of Patients	Percentage (%)
Bladder tumor	50	45.0
Hematuria	31	28.0
Hydronephrosis	13	11.8
Urethral stricture	9	8.1
Cystitis	2	1.8
Bladder calculi	3	2.7
Prostatitis	1	0.9
Colovesical fistula	1	0.9
Urinary incontinence	1	0.9
Total	111	100

DISCUSSION

Cystoscopy can be done for therapeutic and diagnostic reasons¹. The primary indication for cystoscopy in most cases is for the diagnosis of lower urinary tract disease and provision of access to the upper urinary tract⁴. Rigid cystoscopy under general anaesthesia was performed on all the patients in this study.

In this study, the commonest indication for cystoscopy was for bladder tumors 50(45.0%), followed by hematuria 31(28.0%). In the last two decades, available reports indicate that hematuria and the 'prostatic syndromes' constituted the commonest indications for cystoscopy^{4,5}. Similar studies on lower urinary tract endoscopy are largely unavailable in Nigeria. This differences with our own study may be attributed to the increasing availability of more sensitive and less invasive tests such as computerised tomography (CT) scan, Magnetic resonant imaging (MRI) and trans-rectal ultrasonography for the diagnosis of prostatic diseases as well as other pathologies of the upper and lower urinary tract.

Rigid cystoscopy is most often done under general anaesthesia as noted in all the cases in our study. Flexible cystoscopy can be done under local anaesthesia or general anaesthesia⁶. Because of this advantage, the flexible cystoscope can be used for routine outpatient clinical examination of the

bladder. Studies have compared the efficacy of the rigid and flexible cystoscopes in the diagnosis of bladder pathologies. Ambartsumian⁷, in comparing the efficacy of rigid and flexible cystoscopes in the diagnosis of bladder diseases in 250 patients with bladder pathologies noted that the flexible cystoscope was more effective in 98.7% of patients as compared to 72.2% of patients who underwent rigid cystoscopy. Major causes of failure in the rigid cystoscopy group were due to bleeding, prostatic adenoma, fistula, and tumor outside the rigid endoscope's visibility range⁷. The advantages of the flexible cystoscope are that the method is absolutely atraumatic, painless, quick, has no dead zones, and makes complete examination of the mucosa of a diverticula⁷. As a result of these advantages and with increasing therapeutic applications of the flexible cystoscope, the need for rigid cystoscopy may decrease or disappear over time. Also patient tolerance and preference for the procedure as well as the lower post operative morbidity may be a driving force for the future use of the flexible cystoscope as against the rigid cystoscope⁸.

In conclusion, the indications for cystoscopy may vary from centre to centre. In our experience, the most common indication is for bladder tumor. The procedure is well tolerated by the patients with low incidence of morbidity. The flexible cystoscope offers more advantage in that it is less invasive and can be done under local anaesthesia. It is better tolerated and preferred by patients. We recommend that centres should go a step further to acquire the flexible cystoscopes to compliment the rigid scopes in keeping with contemporary trends.

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