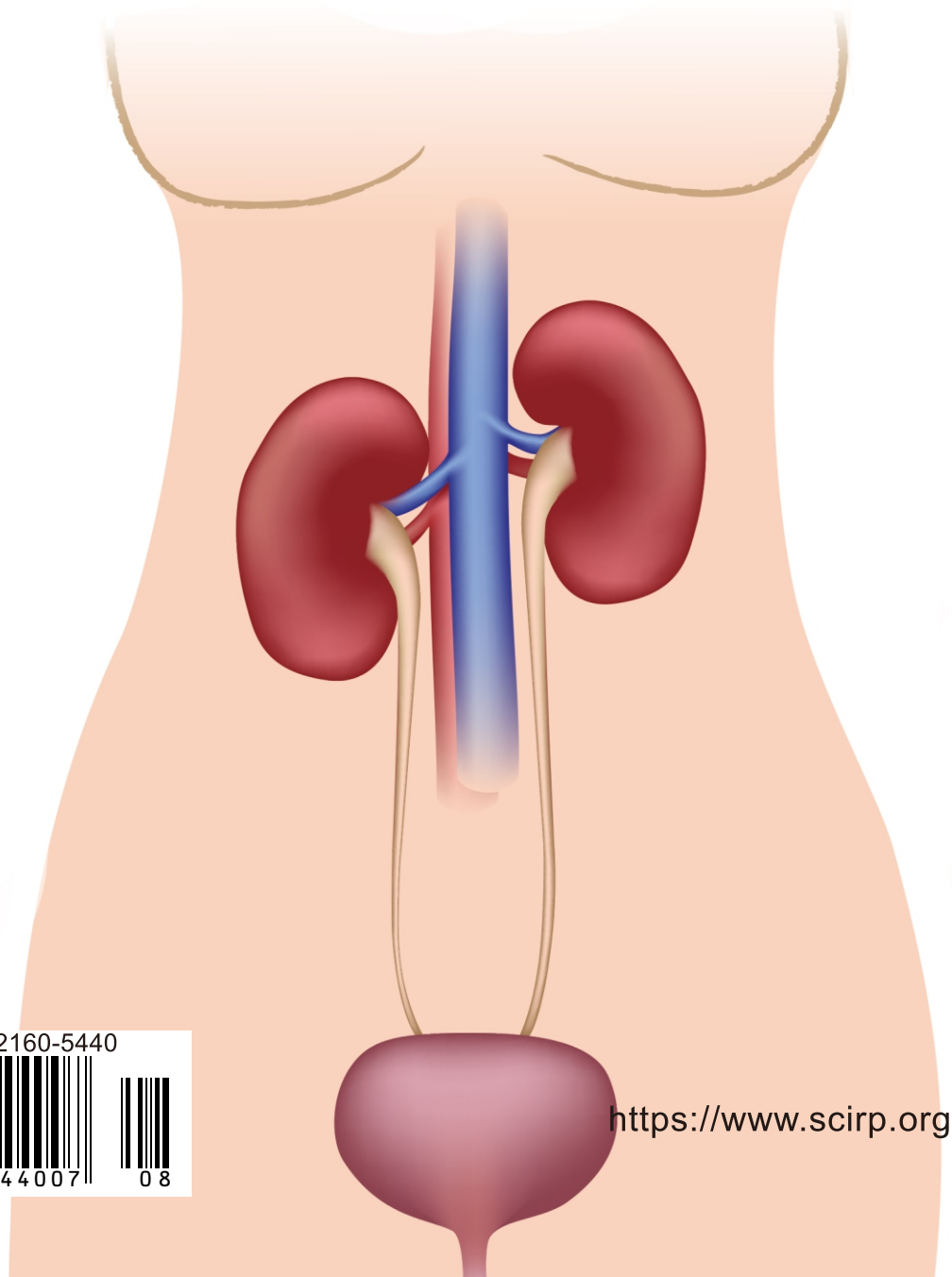
ISSN: 2160-5440 Volume 10, Number 8, August 2020

Scientific Research Publishing

Open Journal of Urology



ISSN: 2160-5440

https://www.scirp.org/journal/oju

Journal Editorial Board

ISSN 2160-5440 (Print) ISSN 2160-5629 (Online)
https://www.scirp.org/journal/oju

Scientific Research Publishing

Open Journal of Urology, 2020, 10, 233-244
https://www.scirp.org/journal/oju
ISSN Online: 2160-5629
ISSN Print: 2160-5440

Table of Contents

Volume 10 Number 8 August 2020

Open Journal of Urology (OJU)
Journal Information

SUBSCRIPTIONS

The *Open Journal of Urology* (Online at Scientific Research Publishing, https://www.scirp.org/) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:
Print: $79 per issue.
To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements
Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)
Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.
E-mail: sub@scirp.org

COPYRIGHT

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:
E-mail: oju@scirp.org

Scientific Research Publishing

Open Journal of Urology, 2020, 10, 233-238
https://www.scirp.org/journal/oju
ISSN Online: 2160-5629
ISSN Print: 2160-5440

Rare Case of Spontaneous Perinephric Hematoma with Two-Year Follow-Up

Lit Kiat Tan[1*], George Eng Geap Lee[2]

[1]International Medical University, Bukit Jalil, Malaysia
[2]Monash University Sunway Campus, Bandar Sunway, Malaysia
Email: *litkiat_tan@hotmail.com

How to cite this paper: Tan, L.K. and Lee, G.E.G. (2020) Rare Case of Spontaneous Perinephric Hematoma with Two-Year Follow-Up. *Open Journal of Urology*, **10**, 233-238.
https://doi.org/10.4236/oju.2020.108027

Received: May 26, 2020
Accepted: August 7, 2020
Published: August 10, 2020

Abstract

Background: Spontaneous perinephric hematoma with no associated pathology or provocation is a rare clinical phenomenon. The hematoma requires a two-year interval for a favorable hematoma resolution, and no associated hypertension or renal scarring. **Aims:** Evidence of the efficacy of conservative management for spontaneous perinephric hematoma with a 2-year follow up. **Case Presentation:** A previously healthy 38-year-old woman, presented with a sudden onset of left flank pain, associated with fatigue and pallor. The patient remained hemodynamically stable with no significant history or associated provocations identified. **Conclusion:** The acute management strategy is favorable in such condition, as the hematoma remains under tamponade in the retroperitoneal space, regardless of the size and organ displacement. Closed observation, serial blood investigation and repeated CT scans are vital to assist in the decision to intervene.

Keywords

Spontaneous Perinephric Hematoma, Gerota's Fascia, Kidney, Lenk's Triad, Conservative Management

1. Introduction

Spontaneous perinephric hematoma was first described in 1856 by Wunderlich, which is defined as the accumulation of blood in the perinephric space from non-traumatic and non-iatrogenic cause [1] [2]. The most common etiology of spontaneous perinephric hematoma is renal angiomyolipoma. The unprovoked spontaneous bleeding from renal angiomyolipoma is observed to correlate with the size of the lesion [3]. Although the spontaneous perinephric bleeding with no associated renal pathology is documented in other literature, its occurrence is

a rare clinical phenomenon [4]. Regardless of the pathology and the origin of the bleeding, spontaneous perinephric hematoma has clinical manifestation described as Lenk's triad, associated with acute flank pain, flank mass and hypovolemic-shock. The acute and long-term management of the perinephric hemorrhage is also not well reported in other literature. Some clinicians favor exploratory surgery with high possibility of nephrectomy, while others recommended conservative management [5]. Favoring the latter mode of management, we present an unusual case of spontaneous perinephric hematoma effectively treated conservatively. Our case report also has the benefit of progressive follow-up, with regular blood pressure monitoring, ultrasound imaging, urinary analysis and blood investigations. Our data revealed that a favorable resolution of renal hematoma could take up to twenty-four months. The two-year follow-up also has no associated sequelae such as hypertension, renal scaring or functional impairment.

2. Case Presentation

A previously healthy 38-year-old woman, presented to the accident and emergency with a sudden onset of left flank pain, with associated fatigue and pallor shortly after the presentation of pain. The patient reported gross hematuria with no associated dysuria. The medical history revealed no evidence of provocation leading to the acute pain. The abdominal examination demonstrated tender mass arising from the left upper quadrant of the abdomen, and the patient remained hemodynamically stable. Laboratory investigation demonstrated anemia (serum hemoglobin at 8.1 g/dL, Low MCV at 65 fL, and Low MCH at 20 pg) with no impairment of renal function. The urinary analysis confirmed hematuria with no other abnormalities. Abdominal ultrasound revealed a large heterogeneous lesion, measuring 9.8 cm × 6.9 cm × 7.7 cm, located at the left suprarenal region **Figure 1**.

The initial non-contrasted Computed Tomography Urogram (CTU) confirmed the lesion with internal hyperdense signal, consistent with perinephric hematoma.

Figure 1. Initial abdominal ultrasound scan (9.8 cm × 6.9 cm × 7.7 cm).

The location of the lesion was noted to displace the pancreas superiorly and the left kidney inferiorly Figure 2. The subsequent contrasted CT scan did not demonstrate active hemorrhage; however, the origin of the bleeding was suspected to be arising from the left adrenal resulting in perinephric hematoma in the superior aspect of the left kidney. The patient was admitted for close observation. Patient was on normal saline during admission. Patient is given NSAIDs (IM Pethidine 75 mg PRN) for pain relief and IV prophylactic antibiotic (Ceftriaxone 1 g BD). Four-hourly vital sign examinations were performed, twice daily serial renal function and hemoglobin were also carried out. The renal function profile remained within normal range throughout the admission of the patient, while hemoglobin remained low, ranging from 8.1 - 8.3 g/dL. Serial abdominal ultrasound scans were performed at day two and day five following the incident, each with insignificant changes. The patient was discharged uneventfully after she remained pain-free and hemodynamically stable. She was advised to adhere to strict bed rest for a fortnight and daily self-monitoring of the blood pressure. The hematoma remained unaltered. The patient was subsequently followed up with three-monthly abdominal ultrasound scans and laboratory investigations. The two-year follow-up ultrasounds demonstrated significant resolution of the hematoma, with no intra-cystic echogenicity Figure 3. The dimensional

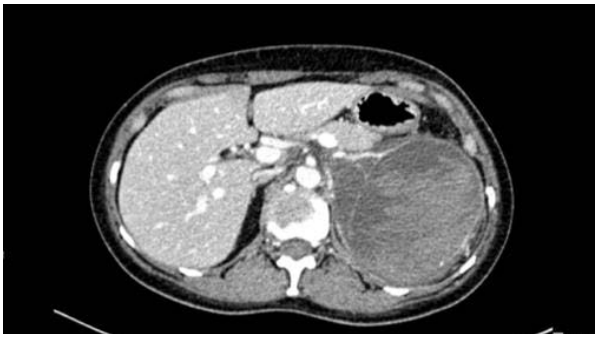


Figure 2. CT Urogram of the Perinephric Hematoma.

Figure 3. Ultrasound scan showing the resolution of the hematoma. (2.2 cm × 2.9 cm × 2.0 cm).

change of 9.8 cm × 6.9 cm × 7.7 cm to 2.2 cm × 2.9 cm × 2.0 cm was calculated, which translated to a volume reduction from 84.8 cc to 10.57 cc over a twenty-four-month interval.

3. Discussion

Spontaneous perinephric hematoma is uncommon. However, the initial management of such condition is critically important, as the acute uncontrolled bleeding can be life threatening. The mode of intervention is generally dependent on factors such as the symptomology and hemodynamic stability. Multi-phased contrasted CT scan is the goal standard to determine the extent of a hematoma, adjacent organs involvement and the source of bleeding [1]. Repeated CT scans may also be necessary, as the secondary bleeding can also change the course of intervention. The overall patient symptoms, hemodynamic stability and the extent of injury on CT scan are important factors to take into account prior to determining the need for conservative management, radiological intervention or surgical exploration [2].

According to the literature review, the recommendation for the initial management of spontaneous perinephric hematoma is variable. One study recommended exploratory surgery and nephrectomy for all cases, regardless of patient's status and the severity of hematoma. Such decision was based on the observation that 43% of the individuals were diagnosed to have had renal malignancy after the nephrectomy. Therefore, the authors from the study advocated nephrectomies for all sufferers of spontaneous perinephric hematoma [5]. Another publication supported conservative management as a first line treatment. The study recommended close observation as the primary protocol in yielding a successful outcome. However, additional intervention may be necessary dependent on the etiology of the hematoma [6]. Patients with functional impairment due to compression or other pathology associated with spontaneous hematoma would require emergency surgical intervention namely nephrectomy or percutaneous drainage. The monitoring protocol after the spontaneous perinephric hematoma is also reported. Following the initial conservative management, abdominal ultrasound scans at regular intervals beyond eighteen months was advocated [7].

We present a rare case of spontaneous bleed with no associated provocation or renal pathology. To our best knowledge, such presentation of perinephric hematoma is unreported in other literature. In most instances, the initial conservative management is favorable in such condition. Anatomically, active bleeding often ceases when the hematoma remains under tamponade in the retroperitoneal space, regardless of the size and organ displacement. Closed observation, serial blood investigation and repeated CT scans are useful guides on decisions to intervene. Our patient also benefited from bed rest and prophylactic antibiotics for a fortnight, as such measures minimize the risk of secondary bleed and infections in the initial stages of recovery.

The close monitoring of patients following the acute phase management is al-

so necessary. We also present the longest duration of a follow-up in literature. Apart from monitoring the regression of the hematoma, the follow-up consultations also ensured no complications of perinephric abscess, hypertension or renal scaring. Blood and urine investigations are also helpful to ensure overall recovery. Our serial imaging revealed no changes are expected within three weeks following the initial onset of the bleeding. Our longest follow-up of such injury showing eighty percent resolution of the hematoma may require a two-year interval. Lastly, no demonstrable complications of renal scarring or associated hypertension are to be expected. Notably the case report is revealing clinical experience of a single patient, however the rarity of non-provocated bleeding and the relatively long interval of follow-up will provide important data for future management of spontaneous perinephric hematoma.

4. Conclusion

The initial management of spontaneous perinephric hematoma is important as acute uncontrolled bleeding can be life threatening. The acute management strategy in this case has been proven to be favorable, as the hematoma remained under tamponade in the retroperitoneal space regardless of the size and the displacement of other organs. Close observation, serial blood investigation, and CT scans are vital to assist in the decision to intervene. The conservative management of the patient followed by 2 years of close monitoring with regular blood pressure monitoring, ultrasound imaging, urinary analysis, and blood investigations has benefited the patient with the eventual resolution of the hematoma without any complication. Due to the rarity of non-provocation bleeding, we believe the information presented here will benefit future managements of spontaneous perinephric hematoma.

Statement of Informed Consent

A verbal informed consent was obtained from the patient for the information and images used in this publication.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Mao, Y., De Oliveira, I.S., *et al.* (2017) Etiology, Imaging Features, and Evolution of Spontaneous Perirenal Hemorrhage. *Clinical Radiology,* **72**, 175.e19-175.e26. https://doi.org/10.1016/j.crad.2016.08.010

[2] Liu, L., *et al.* (2018) A Preliminary Study on Classification and Therapeutic Strategies for. *International Journal of Surgery*, **54**, 86-91. https://doi.org/10.1016/j.ijsu.2018.04.029

[3] La, F.S., *et al.* (2016) Clinical Management of Spontaneous Perirenal Hematomas without Renal Causes: A New Urological Challenge. *European Urology Supplements*,

15, e134. https://doi.org/10.1016/S1569-9056(16)60136-7

[4] Ahn, T., *et al*. (2017) Changing Etiology and Management Patterns for Spontaneous Renal Hemorrhage. *International Urology and Nephrology*, **49**, 1897-1905. https://doi.org/10.1007/s11255-017-1694-8

[5] Guttilla, A., *et al*. (2013) Wunderlich's Syndrome: Three Cases of Acute Spontaneous Renal Bleeding, Conservatively Treated. *Archivio Italiano Di Urologia E Andrologia*, **85**, 210-213. https://doi.org/10.4081/aiua.2013.4.210

[6] Zhang, J.Q., *et al*. (2002) Etiology of Spontaneous Perirenal Hemorrhage: A Meta-Analysis. *Journal of Urology*, **167**, 1593-1596.

[7] Shih, W.J. (2000) Spontaneous Subcapsular and Intrarenal Hematoma Demonstrated by Various Diagnostic Modalities and Monitored by Ultrasonography until Complete Resolution. *Journal of the National Medical Association,* **92**, 200-205.

Scientific Research Publishing

Open Journal of Urology, 2020, 10, 239-244
https://www.scirp.org/journal/oju
ISSN Online: 2160-5629
ISSN Print: 2160-5440

Diagnostic Rigid Urethrocystoscopy: Indications, Results and Pain Assessment

Ousmane Sow[1*], Abdoulaye Ndiath[1], Aboubacar Traore[2], Alioune Sarr[1], Babacar Sine[1], Modou Ndiaye[1], Yassin Sayerh[1], Cyrille Ze Ondo[1], Amath Thiam[1], Ndiaga Seck Ndour[1], El Hadj Malick Daw[1], Ndeye Aissatou Bagayogo[1], Yaya Sow[1], Boubacar Fall[2], Babacar Diao[1], Papa Ahmed Fall[3], Alain Khassim Ndoye[1]

[1]Urology-Andrology Department, Aristide Le Dantec Hospital, Dakar, Senegal
[2]Urology-Andrology Department, De la Paix Hospital, Ziguinchor, Senegal
[3]Urology-Andrology Department, Dalal Jamm Hospital, Dakar, Senegal
Email: *sowman87@yahoo.fr

How to cite this paper: Sow, O., Ndiath, A., Traore, A., Sarr, A., Sine, B., Ndiaye, M., Sayerh, Y., Ze Ondo, C., Thiam, A., Ndour, N.S., Daw, E.H.M., Bagayogo, N.A., Sow, Y., Fall, B., Diao, B., Fall, P.A. and Ndoye, A.K. (2020) Diagnostic Rigid Urethrocystoscopy: Indications, Results and Pain Assessment. *Open Journal of Urology*, **10**, 239-244.
https://doi.org/10.4236/oju.2020.108028

Received: August 5, 2020
Accepted: August 24, 2020
Published: August 27, 2020

Abstract

Background: Over the last 50 years, endourology has revolutionized urological practices worldwide. This is not so in many urological centers in West Africa. Although, some centers have made progress in the level of urological services that they offer; many of such centers provide rigid urethrocystoscopy services. Rigid urethrocystoscopy is an endoscopic examination that explores the urethra, bladder and prostate in men. **Aims:** We report the indications, results and pain assessment of rigid urethrocystoscopy in our center. **Patients and Methods:** We carried out a retrospective, descriptive, monocentric study in our center between January 2016 and June 2018. The study included all patients who had a rigid urethrocystoscopy under local anaesthesia. We studied the following parameters: sex, age, indications for the examination, outcomes and the pain assessment. **Results:** Five hundred and forty-one patients were included. The sex-ratio was 1.49. The mean age was 49.47 ± 18.48 years (12 years and 91 years). Lower urinary tract symptoms (29%) and hematuria (28%) were the most common indications. The rigid urethrocystoscopy was normal in 26.8% of patients. Bladder tumors (21.2%) were the most frequent lesions. In men, prostate tumors were more common (21%) followed by bladder tumors (17.9%), while in women, bladder tumors (26.3%) were predominant followed by cystopathy lesions (12.4%).The mean Simple Verbal Scale (SVS) score was 1.25 in women and 2.1 in men. **Conclusion:** Rigid urethrocystoscopy was relatively well tolerated by our patients. Hematuria was the primary indication and the main etiologies were bladder and prostate tumors.

Keywords

Rigid Urethrocystoscopy, Bladder Tumors, Hematuria

1. Introduction

Urethrocystoscopy is an endocavitary exploration under visual control of the lower urinary tract. It is a common practice examination in urology that has undergone numerous modifications to date, allowing better results and greater comfort for the practitioner and the patient [1]. It is increasingly performed on an outpatient basis under local anesthesia. Despite the existence of other lower urinary tract diagnostic methods, urethrocystoscopy is an important diagnostic tool in a wide range of diseases dominated by bladder tumors often revealed by hematuria [2]. The practice of endourology remains limited in our context, contrary to the Western where it is commonly used [3]. In Senegal, Jalloh *et al.* [4] reported that hematuria was the main indication for urethrocystoscopy and the etiologic diagnosis was dominated by bladder and prostate tumors. The aim of our study was to determine the profile of patients who underwent a diagnostic rigid urethrocystoscopy and to describe the indications, results and pain assessment.

2. Patients and Methods

This is a retrospective, descriptive, single center study conducted in our department between January 2016 and June 2018. The data were collected from records archived in the department during the study period. All patients who underwent rigid urethrocystoscopy (RU) under local anaesthesia and whose records were archived were included. Ten ml of 2% lidocaine gel, administered through the external urethral orifice, was used for local anaesthesia in men. The material used was:

- Optics 12˚ and 30˚.
- A sheath 22 Fr.
- Cold light.
- The camera and monitor.

Urine culture was not systematically done before the urethrocystoscopy.

Studied parameters were: sex, age, indications, outcomes and the pain assessment. Pain tolerance was assessed by phone 24 hours after the exam using a simple verbal scale (SVS):

- No pain: 0.
- Mild pain: 1.
- Moderate pain: 2.
- Intense (severe) pain: 3.
- Extremely intense pain: 4.

Data collection and analysis were done with Excel 2007 Software.

We performed descriptive analysis.

3. Results

We identified 541 cases over a period of 2.5 years (18 cases per month). The sex-ratio was 1.49. The mean age was 49.47 ± 18.48 years (12 - 91 years). The most frequent indications were lower urinary tract symptoms (29%) and hematuria (28%). In men, the most frequent indications were lower urinary tract symptoms (38%) and hematuria (34%). In women, the most frequent indication was the assessment for extension of a cervical tumor (40.5%), followed by hematuria (18.5%) and lower urinary tract symptoms (16%) (Figure 1). Urethrocystoscopy was normal in 26.8% of patients. Bladder tumors (21.2%) were the most common lesions. In men, prostate tumors were more common (21%) followed by bladder tumors (17.9%). In women, bladder tumors (26.2%) were predominant, followed by cystopathy lesions (12.4%). Urethral strictures were objectified in 36 men (11.1%). Urethral stricture was more often localized to the anterior urethra in 32 men (88.9%), while 9 women (4.2%) had urethral meatus stricture (Table 1). We performed urethral dilatation in 23 patients (4.2%) for a urethral stricture that was objectified at the RU, and 14 patients (2.6%) had a

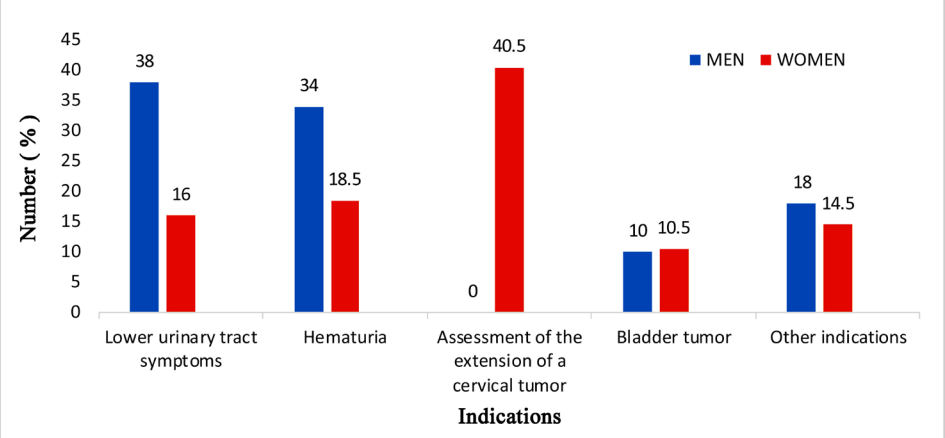


Figure 1. Distribution of indications for rigid urethrocystoscopy according to sex.

Table 1. Types of diseases according to sex.

Diseases	Males	Females	Total
Bladder tumors	58 (17.9%)	57 (26.2%)	115 (21.2%)
Prostate Tumors	68 (21%)	0 (0.0%)	68 (12.6%)
Schistosomiasis lesions	53 (16.4%)	18 (8.3%)	71 (13.2%)
Cystopathy lesions	18 (5.5%)	27 (12.4%)	45 (8.3%)
Urethral Stenosis	36 (11.1%)	9 (4.2%)	45 (8.3%)
Other lesions	32 (9.9%)	20 (9.3%)	52 (9.6%)
Normal cystoscopy	59 (18.2%)	86 (39.6%)	145 (26.8%)
Total	**324 (100%)**	**217 (100%)**	**541 (100%)**

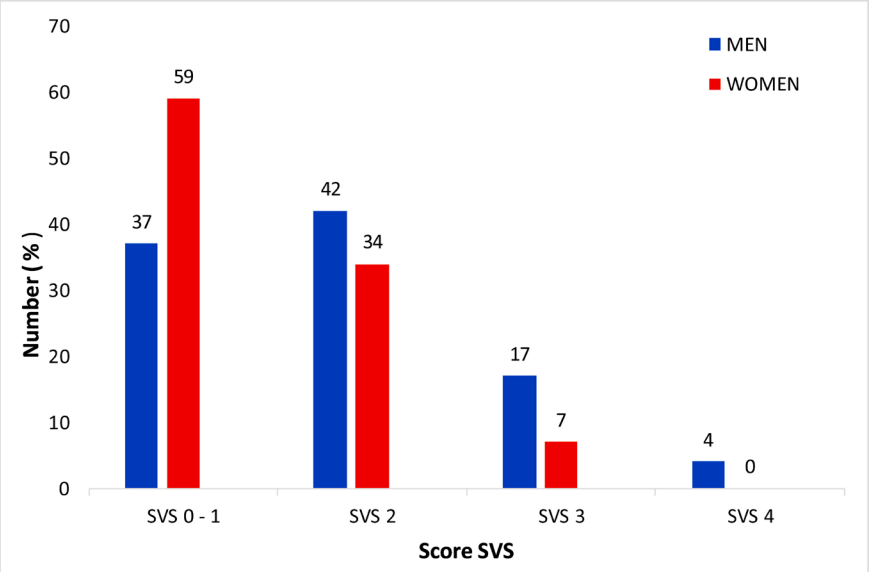


Figure 2. Distribution of patients, according to the simple verbal scale and sex (n = 163).

bladder biopsy indicated for a bladder tumor. SVS was assessed in 163 (95 males and 68 females) who accepted the survey. The mean of the SVS was 1.25 in women and 2.1 in men. Pain was higher in men (63%) than in women (41%) (**Figure 2**).

4. Discussion

The mean number of RU (18 per month) in our institution was higher than Jalloh's one (13 per month) in similar study in the urology department of Idrissa Pouye Hospital (Dakar, Senegal) [4]. This difference can be explained by the lower cost of the RU in our center but also by the proximity of the RU to the Nephrology, pediatrics and cancer departments. The latter address to us their patients mainly in the cervical tumor extension assessment with particular interest in the state of the ureteral meatus. There is a predominance of males in RU [4] [5]. According to Samuel, hematuria is a risk factor for undergoing cystoscopy [5]. In our study, hematuria was the second indication of RU in men (34%) and bladder tumors were the most common lesion in our study (21.25%). The high rate of bladder tumors in our study may be explained by the persistence of bilharzia endemia, which is a risk factor of bladder tumors [6] [7]. Among patients with prostatic tumors, the most frequent indication for examination was lower urinary tract symptoms (29%), followed by hematuria (28%). These results are similar to those of Jalloh and al. [4]. Hematuria is a diagnosis of elimination in benign prostatic hyperplasia, and requires more investigation before linking it to benign prostatic hyperplasia [8]. There is a correlation between prostate volume and the risk of hematuria which increase with prostate volume [8]. In our study, 9 women had urethral meatus stricture versus 5 patients in Lee *et al.* study [9]. Urethral meatus stricture in women is rare. It was commonly caused by traumatic and iatrogenic injuries, or inflammatory disease. Diagnosis

of urethral meatus stricture in women is clinical. A good clinical examination would have spared 9 of our patients from invasive examination. In our series, women tolerated pain better. This may be explained by the short length of female urethra [10]. Our results are similar to those reported by Goldfischer *et al.* [11] who noted a higher mean level of pain perception in men during RU. However, this painful perception during RU could be decreased by using flexible cystoscopy in our center. Flexible cystoscopy considerably reduce pain compared to rigid cystoscopy [12] [13] [14]. Urine culture was not systematic before urethrocystoscopy and any antibioprophylaxy is needed before endourological procedure without tissue invasion, except in the case of abnormal urinary tract [15] [16]. Thus, in our country, due to financial cost of urine culture and long waiting period before results, we often dispensed with this examination before RU. The limits of our study were certainly the lack of data in children. RU is performed under general anaesthesia in children. We only included patients who had local anaesthesia. Due to the retrospective study nature of our study, we excluded some patients because of missing data.

5. Conclusion

Rigid urethrocystoscopy is a useful technique for diagnosis in low urinary tract diseases. Bladder and prostate tumors were the more common diseases objectified. Hematuria and lower urinary tract symptoms were the most frequent indications for urethrocystoscopy. Rigid urethrocystoscopy was well tolerated by our patients especially in women.

Author's Contribution

All authors have read and approved the final version of the manuscript.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Martin, M. and Fangerau, H. (2011) Gaining Insight Visualization of the Invisible in Urology: On the History of the Technique and Evidence in Urological Endoscopy. *Urologe A*, **50**, 1311-1138. https://doi.org/10.1007/s00120-011-2612-9

[2] Cicione, A., Cantiello, F. and Damiano, R. (2013) Cystoscopy in Non-Muscle-Invasive Bladder Cancer: When and How (Rigid or Flexible). *Urologia*, **80**, 11-15. https://doi.org/10.5301/RU.2013.10858

[3] Klotz, F. (2003) L'endoscopie dans les pays en voie de développement. *Acta Endoscopica*, **33**, 756-757. https://doi.org/10.1007/BF03002617

[4] Jalloh, M., Niang, L., Andjanga-Rapono, Y.E., Ndoye, M., *et al.* (2015) Urétrocystoscopie ambulatoire au service d'Urologie/Andrologie de l'Hôpital Général Grand Yoff de Dakar. *African Journal of Urology*, **22**, 115-120. https://doi.org/10.1016/j.afju.2015.05.008

[5] Samuel, A.D, Dattatraya, P., Mehrdad, A. and Muta, M. (2016) Urologist Use of Cystoscopy for Patients Presenting with Hematuria in the United States. *Urology*, **100**, 20-26.

[6] Kane, R., Niang, L., Diallo, Y., Jalloh, M., *et al.* (2014) Advanced Bladder Cancer in Senegal: Epidemiological and Clinical Aspects. *Open Journal of Urology*, **4**, 127-131. https://doi.org/10.4236/oju.2014.411022

[7] Diao, B., Amath, T., Fall, B., Fal,l P.A, Diémé, M.J., Steevy, N., *et al.* (2008) Les cancers de la vessie au Sénégal: Particularités épidémiologiques, cliniques et histologiques. *Progrès en Urologie*, **18**, 445-448. https://doi.org/10.1016/j.purol.2008.04.016

[8] Vasdev, N., Kumar, A., Veeratterapillay, R. and Thorpe, A.C. (2012) Hematuria Secondary to Benign Prostatic Hyperplasia: Retrospective Analysis of 166 Men Identified in a Single One Stop Hematuria Clinic. *Current Urology*, **6**, 146-149. https://doi.org/10.1159/000343529

[9] Lee, J.W., Doumouchtsis, S.K., Jefery, S. and Fynes, M. (2009) Evaluation of Outpatient Cystoscopy in Urogynaecology. *Archives of Gynecology and Obstetrics*, **279**, Article No. 631. https://doi.org/10.1007/s00404-008-0773-6

[10] Rabischong, B. (2017) Anatomie des systèmes urinaire et pelvien de la femme. In: Deffieux, X., Ed., *Incontinence Urinaire Féminine*, Elsevier Masson, Paris, 3-12. https://doi.org/10.1016/B978-2-294-75732-7.00001-7

[11] Goldfischer, E.R., Cromie, W.J., Karrison, T.G., Naszkiewicz, L. and Gerber, G.S. (1997) Randomized, Prospective, Double-Blind Study of the Effects on Pain Perception of Lidocaine Jelly Versusplain Lubricant during Outpatient Rigid Cystoscopy. *Journal of Urology*, **157**, 90-94. https://doi.org/10.1016/S0022-5347(01)65292-3

[12] Greenstein, A., Greenstein, I., Senderovich, S. and Mabjeesh, N.J. (2014) Is Diagnostic Cystoscopy Painful? Analysis of 1,320 Consecutive Procedures. *International Brazilian Journal of Urology*, **40**, 533-538. https://doi.org/10.1590/S1677-5538.IBJU.2014.04.13

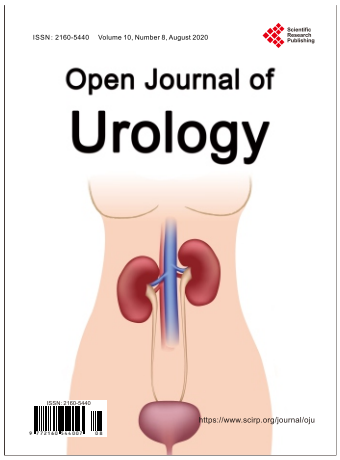
[13] Seklehner, S., Remzi, M., Fajkovic, H., Saratlija-Novakovic, Z., Skopek, M., Resch, I., *et al.* (2015) Prospective Multi-Institutional Study Analyzing Pain Perception of Flexible and Rigid Cystoscopy in Men. *Urology*, **85**, 737-741. https://doi.org/10.1016/j.urology.2015.01.007

[14] Seklehner, S.A., Remzi, M., Fajkovic, H., Saratlija-Novakovic, Z. and Skopek, M., Resch, I., *et al.* (2015) A Multi-Institutional Trial Analyzing Pain Perception of Flexible and Rigid Cystoscopy in Men. *European Urology Supplements*, **14**, e839-e839a. https://doi.org/10.1016/S1569-9056(15)60828-4

[15] Pescheloche, P., Gallon, J., Parier, B., Bessede, T., Irani, J., Verrier, C. and Hammoudi, Y. (2017) Faut-il contrôler la stérilité des urines avant cystoscopie en externe? *Progrès en Urologie*, **27**, 728-729. https://doi.org/10.1016/j.purol.2017.07.107

[16] Karmouni, T., Bensalah, K., Alva, A., Patard, J.J., Lobel, B. and Guillé, F. (2001) Role of Antibiotic Prophylaxis in Ambulatory Cystoscopy. *Progrès en Urologie*, **11**, 1239-1241.

Call for Papers



Open Journal of Urology (OJU)

ISSN 2160-5440 (Print) ISSN 2160-5629 (Online)

https://www.scirp.org/journal/oju

Open Journal of Urology **(OJU)** is an international journal dedicated to the latest advancement of urology. The goal of this journal is to provide a platform for researchers and academics all over the world to promote, share, and discuss various new issues and developments in urology related problems. All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy.

Subject Coverage

The journal publishes original papers including but not limited to the following fields:

- Female Pelvic Medicine and Reconstructive Surgery
- General Urology
- Male and Female Sexual Dysfunction
- Pediatric Urology
- Reconstructive Urology
- Stone Disease
- Urinary Physiology
- Urodynamics and Neurourology
- Urologic Oncology

We are also interested in: 1) Short reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book reviews—Comments and critiques.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

https://www.scirp.org/journal/oju **E-mail: oju@scirp.org**

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience

Scientific Research Publishing

Website: https://www.scirp.org

Subscription: sub@scirp.org

Advertisement: service@scirp.org