EUTUBS: A Mnemonic for the complete endoscopic examination of the lower urinary tract.

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Summary

Urethroscopy is now routinely done in standard urological practice. The availability of the flexible cystoscope for outpatient procedures has further increased the number of cystoscopists. However, there are currently no formal training schedules for urethroscopy. This mnemonic has been developed to serve as a template for complete endoscopic examination of the lower urinary tract to which the cystoscopist may refer when undertaking this operation. It focuses on the common abnormalities that the endoscopist may encounter, and is not intended to be an exhaustive list of all abnormalities of the lower urinary tract. Furthermore, it is not meant to obviate the need for practical training of those wishing to carry out the procedure as part of their clinical practice.

Keywords: Cystoscopy, Surgery Residency Training, Endoscopy, Mnemonic.

Résumé

L'urethroscopy est fait d'office dans une méthode urologique courante. La disponibilité du cystoscope souple pour les services des consultation externes a augmenté de plus le nombre des cas de cystoscopistes. Toutefois, à présent, il n'y a pas un programme de formation conventionnelle pour l'urethroscopy. Cette mnémonique a été élaboré afin de servir comme une sablière pour un examen endoscopique complet de l'appareil urinaire inférieur à quoi le cystoscopiste peut se rapporter au cours de la chirurgie.

Son objet est de mettre en relief les anomalies que l'endoscopie peut éprouver et elle n'est pas destinée à être une liste exhaustive de toutes les anomalies de l'appareil urinaire inférieur.

De plus, elle n'est pas destinée d'obvier à la nécessité pour la formation pratique de ceux qui veulent suivre le mode de procédure comme une section de leur étude clinique.

Introduction

Endoscopic examination of the male and female lower urinary tracts [Figures 1 & 2] (urethroscopy) is fundamental to urological practice and is now a routine procedure. The availability of the flexible cystoscope for outpatient procedures has further increased the number of cystoscopists. However, there are currently no accredited training protocols for the procedure. We have developed an easily remembered mnemonc that would guide complete endoscopic examination of the lower urinary tract, and to which the cystoscopist may refer when undertaking this operation. The mnemonc focuses on the common abnormalities that the endoscopist may encounter, and is not intended to be an exhaustive list of all abnormalities of the lower urinary tract.

The Mnemonic

(E) External examination.

1. Sexual Development
   a. Paediatric / Adolescent
   - Tanner stage of sexual development
   - Pubic hair (P1 - V1)
   - Male genitalia (G1 - V)
   - Hair distribution appropriate for gender - Yes/No.
   b. Adult

2. Female Genitalia
   Uncircumcised / Circumcised
   - Normal / Abnormal
   - Normal / Stenosis / Protruding urethral caruncle
   - Present - Normal / Abnormal
   - Absent

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Vagina
- Paediatric - Normal/Abnormal
- Preadolescents - Transverse introital diameter <0.7cm (Normal)
- - Transverse introital diameter >0.7cm (Abnormal)
- Adult - Normal
- Abnormal - Prolapse (Specify) / Tumour

3. Male Genitalia
a) Scrotum
i) Testes
- Number
- Descent - Normal/Maldescend / Ectopic
- Lie - Normal/Transverse
- Size (Orchidometer) - Normal / Atrophic
- Consistency - Normal / Soft /Hard
- Mass - No
- Yes-Size /Consistency /Position

ii) Epididymis (Caput / Body / Tail)
- Normal / Abnormal
- Mass - No
- Yes- Size / Consistency /Position

b) Penis
- Foreskin - Circumcised / Uncircumcised
- Phimosis - No
- Yes- Unfibrotic / Fibrotic (Balanitis Xerotica Obliterans [BXO])
- Glans - Normal / BXO / Tumour
- Meatus - Position - Normal / Hypospadias / Epiapadias
- Stenosis - No
- Yes - Idiopathic / Post circumcision / BXO
- Shaft - Normal / Abnormal
- Chordee - No / Yes - Dorsal / Ventral / Lateral

4. Genital/Perineal Skin
- Normal
- Rash / Infections - No / Yes - Distribution
- Dampness - No / Yes
- Injury - No / Yes - New / Old (Scars)

5. Anus (may be deferred until end of cystoscopic examination)
- Normal / Discharge (describe) / Sinuses / Fistulae / Masses
- Peri-anal reflex (if patient awake) - Present / Absent
- Sphincter tone - Normal / Abnormal - Lax / Increased
- Rectal wall - Normal / Abnormal (Describe)
- Prostate (males) - Normal / BPH / CAP
- Other pelvic masses - No
- Yes (describe).

(U) (Endoscopic examination of the) Urethra

Normal
Abnormal - Stenoses / Stricture - Location
- Location
- Length - Short / Long
- Passable / Impassable
- No
- Yes - Occlusive / Non-occlusive
- No
- Yes - Location

Mass lesions / Foreign bodies / Calcifications - Location
External sphincter - Normal / Abnormal
Prostate (Males) - Normal / Cristae / Volves
Urine sample - Microscopy / Culture and sensitivity / Cytology

(T) (Endoscopic examination of the) Trigone
Bladder neck - Patent / Contracture - Idiopathic / Post-resection
- Elevation (Males) - No / Yes
Trigone proper - Anatomy - Shape
- Ridge - Normal / Abnormal
Epithelium - Normal transitional / Squamous metaplasia/Tumours
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(U) (Endoscopic examination of the) Urinary orifices

<table>
<thead>
<tr>
<th>Number</th>
<th>Single / Duplex (State positions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>Normal / Ectopic</td>
</tr>
<tr>
<td>Shape/configuration</td>
<td>Normal / Abnormal</td>
</tr>
<tr>
<td></td>
<td>Capacious / Stenotic</td>
</tr>
</tbody>
</table>

(B) (Endoscopic examination of the) Bladder

<table>
<thead>
<tr>
<th>Epithelium</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormal openings</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Yes (State anatomical locations)</td>
</tr>
<tr>
<td></td>
<td>Saccules (incomplete bladder wall protrusions)</td>
</tr>
<tr>
<td></td>
<td>Diverticulae (complete protrusions through bladder)</td>
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<tr>
<td></td>
<td>Fistulae - Entero-vesical (males/females), Vesicovaginal (female).</td>
</tr>
</tbody>
</table>

| Tumours                  | Erythema |
| Glomerulations            | |
| Post-filling bleeding / Petechiae | No / Yes |

Trabeculations - No / Yes - Grade I / II / III

Unstable bladder contractions - No / Yes

Capacity

- Paediatric (Average capacity = \( \text{Age [years]} \times 30 \times 40 \))
- Adults (Normal capacity = 450-600mls).

**Considerations in special groups**

This mnemonic should be modified as appropriate when carrying out endoscopic examination in patients who have had gender reassignments or surgical reconstruction of the lower genital tract (e.g. Neobladders or epispias repair).

**Conclusion**

This mnemonic is applicable to both rigid and flexible cystoscopic examination whether done under local or general anesthesia. However, it is not meant to replace formal tuition in the art of cystoscopy and therefore assumes that the endoscopist has a good knowledge of the anatomy of the lower urinary tract and its possible abnormalities. We would therefore like to recommend EUTUBS both as guide to complete endoscopic examination of the lower urinary tract and a complement to current urethrocytospic documentation.

**References**


