TUTOR GUIDE

YEAR 3

PROBLEM # 10
SESSION # I

TRIGGER 1

K. H. a 70-year-old man, was referred to the surgical clinic with a three months history of intermittent hematuria (passing blood and blood clots in the urine). There was no pain during micturition, and no prior history of urinary complaints.

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TRIGGER 2

The patient generally was well, vital signs were normal, and physical examination did not reveal any abnormalities. On Digital Rectal Examination (DRE), the prostate felt normal, and the following investigations were performed.

1. Urine was sent for routine microscopy, culture and sensitivity and cytology
2. Blood was sent for CBC, urea, creatinine, prostate specific antigen (PSA) and
   electrolytes.
3. Imaging:
    1. Ultrasound: Kidney, bladder, prostate
    2. IVU (Intra Venous Urography)
    3. CT

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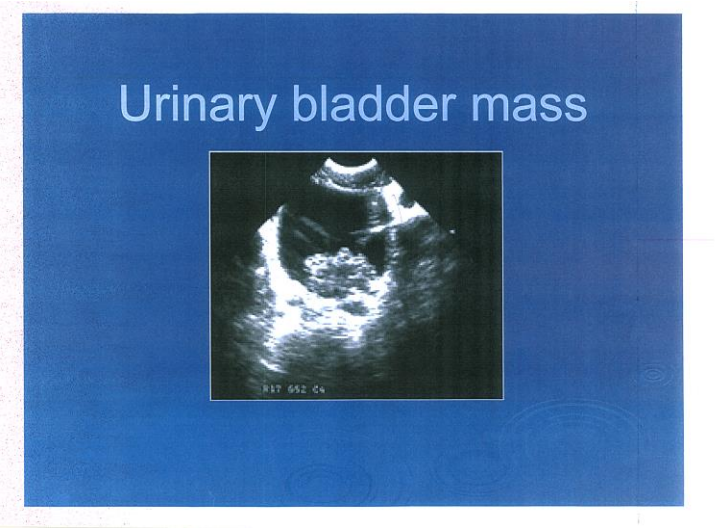
TRIGGER 3

Blood investigations were normal. Urine was concentrated, no other abnormality seen except presence of plenty of RBCs. The culture was sterile and PSA was in normal range. Renal ultrasound revealed a 2-cm mass in the urinary bladder wall **(Fig. 1)**. IVU show the filling defect in the bladder .CT scan showed no evidence of invasion or metastasis. Cytology revealed papillary clusters of atypical transitional epithelial cells, suspicious of malignancy.

On further questioning he admitted to being a heavy smoker over the past 50 years.



(Fig. 1)

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TRIGGER 4

The patient was admitted in the hospital and was prepared for surgery. Under general anaesthesia, cystoscopy was performed, and a 2-cm papillary mass was discovered on the bladder wall. This was resected and sent for histopathology. The rest of the bladder was normal. Post-operatively the patient did well; and catheter was removed on the third day. The histology report came back as a well differentiated papillary transitional cell carcinoma (TCC), pathological tumour stage a (pTa). The patient was discharged and advised to attend clinic for follow-up and regular cystoscopy.

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TRIGGER 5

The patient did not appear for follow up and presented after two years in the clinic with hematuria. He was admitted to the hospital, and prepared for cystoscopy. On cystoscopy there were multiple tumours seen in the floor of the urinary bladder. These were resected endoscopically and sent for histopathology. Report came back as transitional cell carcinoma, moderately differentiated with superficial muscle involvement (pT_2).

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TRIGGER 6

All the investigations (CT scan, bone scan, CXR) excluded the presence of metastasis.
Therefore radical cystectomy and urinary diversion were performed.

STUDENT'S TRIGGER

TRIGGER 1

K. H. a 70-year-old man, was referred to the surgical clinic with a three months history of intermittent hematuria (passing blood and blood clots in the urine). There was no pain during micturition, and no prior history of urinary complaints.

TRIGGER 2

The patient generally was well, vital signs were normal, and physical examination did not reveal any abnormalities. On Digital Rectal Examination (DRE), the prostate felt normal, and the following investigations were performed.

1. Urine was sent for routine microscopy, culture and sensitivity and cytology
2. Blood was sent for CBC, urea, creatinine, prostate specific antigen (PSA) and electrolytes.
3. Imaging:
    1. Ultrasound: Kidney, bladder, prostate
    2. IVU (Intra Venous Urography)
    3. CT Scan & MRI

TRIGGER 3

Blood investigations were normal. Urine was concentrated, no other abnormality seen except presence of plenty of RBCs. The culture was sterile and PSA was in normal range. Renal ultrasound revealed a 2-cm mass in the urinary bladder wall **(Fig. 1)**. IVU show the filling defect in the bladder .CT scan showed no evidence of invasion or metastasis. Cytology revealed papillary clusters of atypical transitional epithelial cells, suspicious of malignancy.

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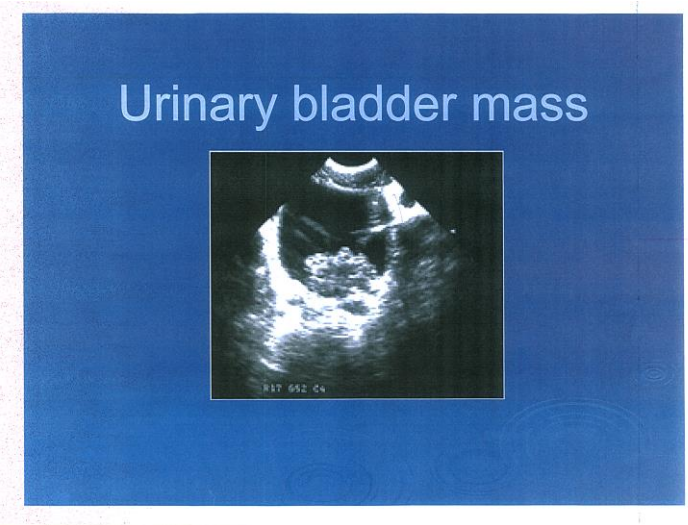

(Fig. 1)

STUDENT'S TRIGGER Cont…

TRIGGER 4

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TRIGGER 5

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TRIGGER 6

All the investigations (CT scan, bone scan, CXR) excluded the presence of metastasis.
Therefore radical cystectomy and urinary diversion were performed.

LEARNING RESOUCES

YEAR 3

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LEARNING RESOURCES ACCESSIBLE AT:

www.accessmedicine.com/
Username: arabiangulf
Password: medicine

1. **Drug for schistosomiasis**
   B.G. Katzung – 14th Edition, (2018); Chap. 53

2. **Bladder Micturition reflex**
   Review of Medical Physiology, By W.F. Ganong
   26th Ed., (2016); Chapter 37

3. **Renal Function & Micturition :** Gannon's Review of medical physiology , 26th Ed;(2019)

OTHER LEARNING RESOURCES:

1. **Anatomy**
   I. **Essential Clinical Anatomy, 6th ed., (2019), Moore,Agur & Dalley.Chapter:5**
   II. **Human Histology,5th Edition (2018), Steven and Lowe's.Chapter:11.**
   III. **Langman's Medical Embryology, 14th Ed., 2018, Thomas W. Sadler**

2. Robbin's Basic Pathology – 9th Ed., (2013)
   Renal cell carcinoma:
   Tumors of urinary bladder and collecting system:
   Prostatic hyperplasia and prostatic adenocarcinoma:
   Wilm's tumor:

   Webpath – Renal pathology – Images 73 – 88

Passing dark coloured urine

LEARNING RESOUCES

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3. Surgery
Haematuria - Hydronephrosis
Urology by Smith, (2008)

4. Micturition Reflex
Guyton and Hall
Textbook of Medical Physiology
14th Ed., (2020); Chap. 26

5. *Shistosomiasis,*
Medical Microbiology
MIMS; 6th Ed., (2019)

6. Radiology
By: Peter Armstrong
Diagnostic Imaging: 7th Ed., (2018); chapter8

7. Psychological Aspects of Aging
The essentials of Clinical Health Psychology
By: Mary Gilhooly and Eileen McDonach
An Average Old Age:
Associations between Ageing Health and Behavior
Chap. 15;

8. Micturition: Text Book of medical physiology Guyton and Hall , 16th Ed (2016); Chapter 26

Resource People:

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Dr. Wael Amin	Anatomy
Dr. Mohamed Alqudah	Physiology
Dr. Kannan Sridharan	Pharmacology
Prof. Fazal Dar	Microbiology
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