

Urinary Schistosomiasis: Urological manifestations & complications

Dr MJ Engelbrecht

Department of Urology

Clinical presentation

- Three clinical stages
 - Swimmer's itch
 - Acute schistosomiasis
 - Chronic schistosomiasis

Swimmer's itch

- Pruritic, macular or maculopapular rash – site of cercarial penetration
- 3 – 18 hours post exposure
- Lasts : few hours - days

Acute schistosomiasis

- Katayama fever
 - Fever
 - Lymphadenopathy
 - Splenomegaly
 - Eosinophilia – 80%
 - Urticaria
 - Sweat
 - Diarrhea
 - Rare with *S. haematobium*
 - 3 – 9 weeks after infection
 - Egg laying = antibodies = syndrome

Clinical pathology

- Other syndromes due to Bilharzia
 - Ayerza syndrome
 - Migration through lungs
 - Endarteritis obliterans
 - Cor pulmonale
 - Loeffler syndrome
 - Hypersensitivity in lungs
 - Asma, cough, hemoptisis

Chronic Schistosomiasis

- Chronic active phase
 - Eggs deposited in bladder or rectum
 - Lasts 2/3 months up to 7 months
 - Clinically
 - Terminal haematuria
 - Dysuria
 - Some years later
 - Absent symptoms
 - Silent obstructive uropathy
 - Chronic or recurrent UTI
 - Salmonella typhi
 - Salmonella paratyphi

Chronic Schistosomiasis

- Chronic inactive schistosomiasis
 - No viable eggs in urine
 - Signs & symptoms
 - Due to sequelae & complications
 - 40 – 60% present during this stage
 - Chronic or acute UTI super imposed on obstructive uropathy

Complications

- Renal complications
 - Xanthogranulomatous pyelonephritis
 - Marked increase in pyelonephritis
 - Nephrotic syndrome
 - Mesangioproliferative
 - Membranoproliferative
 - Minimal change

Complications

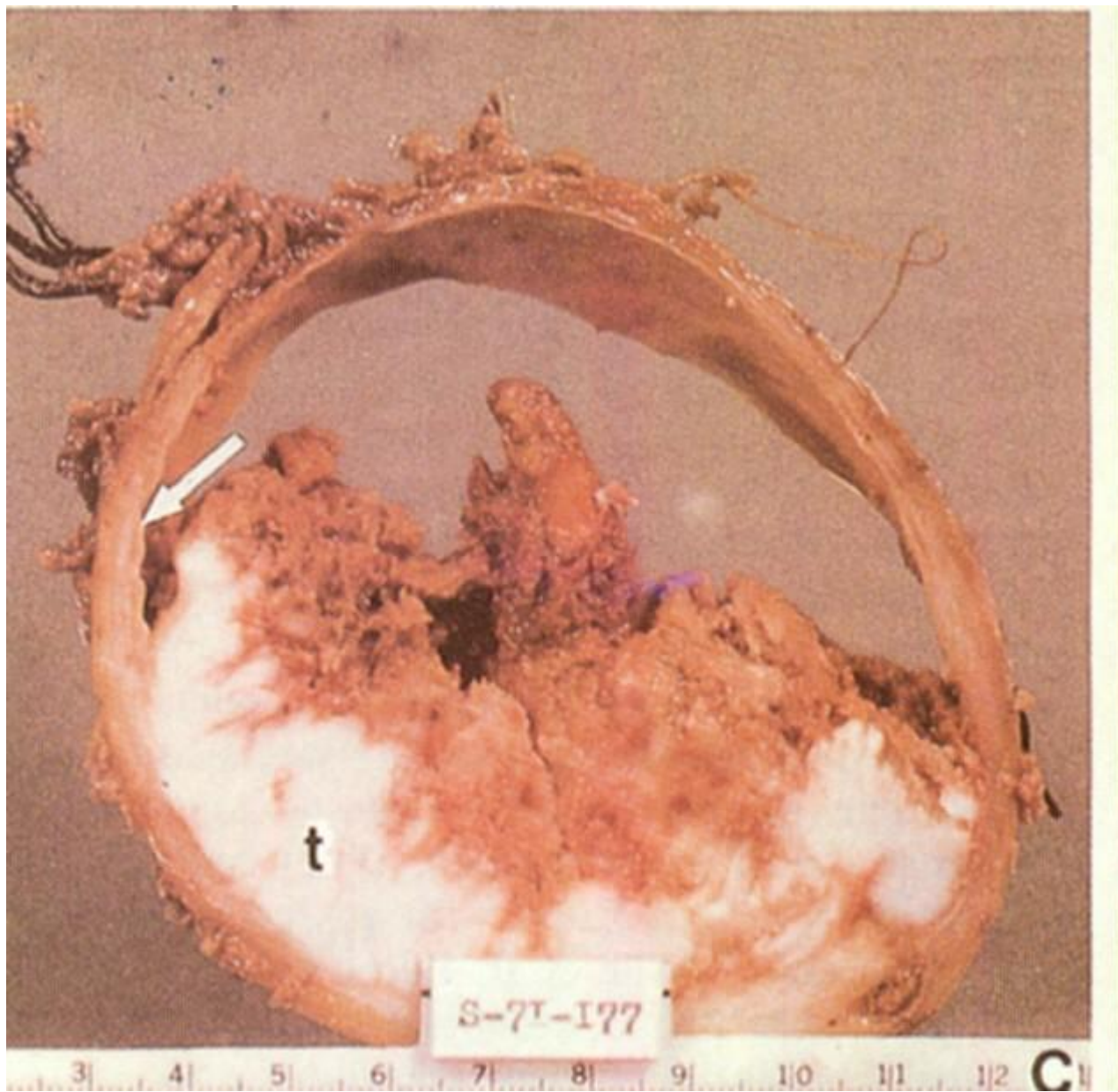
- Ureteral complications
 - Most common
 - Obstruction + /- functional obstruction
 - Hydroureter and hydronephrosis
 - 3 types
 - Segmental ureteral dilatation
 - Tonic hydroureter
 - Atonic hydroureter



Figure 21-19. Intravenous urogram in another Egyptian boy shows scalloping of the bladder and right lower ureter by schistosomal poly-poid lesions.

Complications

- Bladder complications
 - Schistosomal polyposis
 - Schistosomal contracted bladder
 - Pain
 - Urgency
 - Diurnal + nocturnal frequency
 - Incontinence
 - Bladder ulcers
 - Urothelial metaplasia
 - Squamous cell carcinoma



Complications

- Prostate
 - Oviposition possible
 - No correlation with prostatitis
 - Evidence of functional bladder outlet obstruction
 - Partial TUR = reversed clinical signs of obstruction
- Seminal vesical
 - Asymptomatic hematospermia
 - Rarely if ever causes male infertility
- Epididimys
 - Schistosomal epididymitis – variable scrotal pain
 - Calcifications in vas deferens = beaded vas

Tuberculosis of the genito- urinary tract

Transmission

- Inhalation of aerosolized droplet nuclei
- Propability of developing TB in compotent host = 5-10%
- Virtually all AIDS pt will develop TB
- M. Bovis – contaminated milk
- Urinary tract most common site for extra pulmonary TB

Pathology

- Kidney
 - Metastatic renal infection
 - Caseating granulomas
 - Healing leads to fibrosis & calcification
 - Papillary necrosis
 - Infundibulum strictures
 - Hypertension = reduced blood flow



Pathology

- Ureter
 - Most common = uretero vesical junction
 - Sec. to extensive renal disease





Pathology

- Bladder
 - Starts around ureteric orifice = delta signs
 - Ureteric orifice = stricture/golf hole
 - TB ulcers – rare
 - Vesico rectal fistulas

Pathology

- Testis
 - Sec. to infection in epididymis
- Epididymis
 - Globus minor
 - Discharging sinus
 - Beading of vas deferens
- Prostate
 - Rare
 - Perineal sinus

Pathology

- Penis
 - Post coital contact
 - Superficial ulcer on glans
 - Solid nodule
- Urethra
 - Urethral discharge
 - Urethral stricture

Diagnosis

- Clinical
 - Vague, longstanding urinary symptoms
 - Frequent painless micturition
 - Suprapubic pain
 - Recurrent cystitis
 - Hematospermia – rare
 - Painfull testicular swelling
- Tuberculin test
 - Previous exposure vs. active infection

Diagnosis

- Urine MCS
 - Sterile urine
 - Sterile pyuria – 80%
 - Microscopic hematuria - 50%
 - 5 Consecutive first morning urine for ZN and culture
 - Urine for Ribosomal RNA amplification

Radiography

- AXR
 - Calcification in area of the kidney
- IVP
 - Distorsion of calyx
 - Infundibular stenosis
 - Calyceal/parenchymal destruction
 - Thimble bladder – small and contracted



Treatment

- Pharmacological
 - Rifampicin
 - Isoniazid
 - Pyrazinamide
- } 6 – 9 Months

Treatment

- Surgery
 - Nephrectomy – indications
 - Non fx kidney with/without calcifications
 - Extensive disease with hypertension and PUJ obstruction
 - Co existing renal carcinoma
 - Partial nephrectomy
 - Localized area of calcifications with failure of response after 6 weeks therapy
 - Area of calcification slowly increasing in size

Treatment

- Epididymectomy
 - Caseating abscess not responding to chemotherapy
- Ureteral strictures
 - Fibrosis after initiation of therapy