

2022년도 대한비뇨의학회 통합학술대회 (KUCE 2022)

Session 4. Ureteral stricture

Ureteral obstruction d/t supravesical disease

Dalsan You, MD, PhD

Professor, AMIST, Asan Medical Center, UUCM





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1. Introduction

2. Causes of Urinary Tract Obstruction

3. Obstruction d/t Supravesical Disease

4. Take Home Message

Terminology

☞ Hydronephrosis (수신증)

- dilation of renal pelvis or calyces
- may be associated with obstruction but may be present in absence of obstruction

☞ Obstructive uropathy (폐쇄성 요로병증)

- functional or anatomic obstruction of urinary flow at any level of urinary tract

☞ Obstructive nephropathy (폐쇄성 신장병증)

- when obstruction causes functional or anatomic renal damage
-

Prevalence

☞ Hydronephrosis at autopsy (Bell, 1950)

- 3.1% in 59,064 autopsies from neonates to geriatrics
- no gender differences until 20 years
- more prevalent in women in 20 to 60 years d/t pregnancy & gynecologic malignancies
- more prevalent in men after 60 years d/t prostatic diseases

☞ Hydronephrosis at children autopsy (Campbell, 1970; Tan, 1994)

- 2% to 2.5% of children subjected to autopsy
- more prevalent in boys, and majority of cases in <1 year

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Type of Obstruction

- ☞ Congenital vs Acquired
 - ☞ Anatomical (Mechanical) vs Functional
 - ☞ Intrinsic vs Extrinsic
 - ☞ Benign vs Malignant
-

Causes of Obstruction

	Congenital	Acquired	
		Intrinsic	Extrinsic
Supravesical	<ul style="list-style-type: none"> Ureteropelvic junction obstruction Ureterovesical junction obstruction Ureterocele Retrocaval ureter Vesicoureteral reflux 	<ul style="list-style-type: none"> Calculi Inflammation/Infection Trauma Sloughed papillae Tumor Blood clots Uric acid crystals 	<ul style="list-style-type: none"> Pregnant uterus Retroperitoneal fibrosis Aortic aneurysm Uterine leiomyoma Uterine, prostate, bladder, colon, and rectal cancer Lymphoma Pelvic inflammatory disease Endometriosis Accidental surgical ligation
Bladder outlet	<ul style="list-style-type: none"> Bladder neck obstruction Ureterocele Damage to S2-4 Vesicoureteral reflux 	<ul style="list-style-type: none"> Benign prostatic hyperplasia Prostate cancer Bladder cancer Calculi Diabetic neuropathy Spinal cord disease Anticholinergic drugs & α-adrenergic antagonists 	<ul style="list-style-type: none"> Cervical and colon cancer Trauma
Urethra	<ul style="list-style-type: none"> Posterior urethral valve Anterior urethral valve Stricture Meatal stenosis Phimosis 	<ul style="list-style-type: none"> Stricture Tumor Calculi Trauma Phimosis 	<ul style="list-style-type: none"> Trauma

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Congenital

Ureteropelvic junction obstruction

👉 Pathogenesis

- aperistaltic segment of ureter
- aberrant vessels (?)

👉 Indications for Intervention

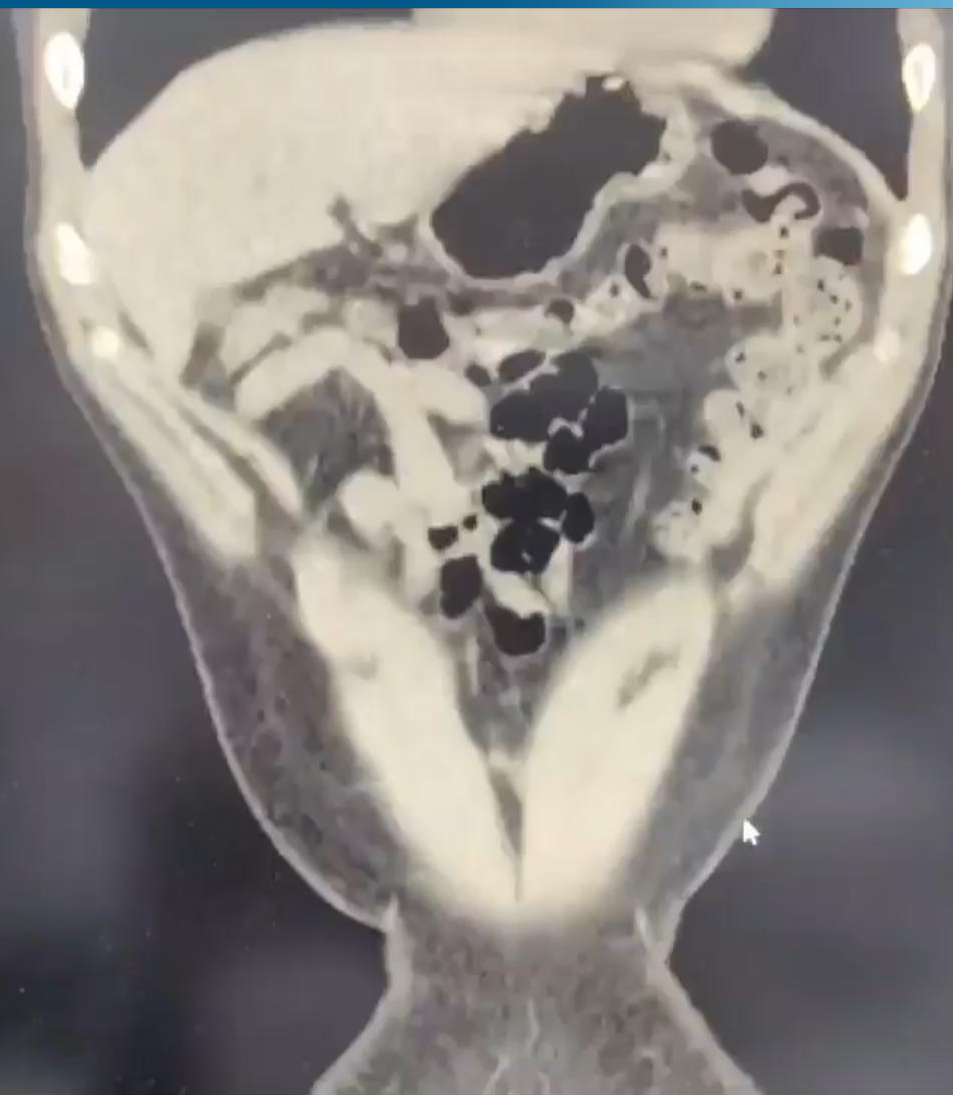
- symptoms associated with obstruction
 - impairment of overall renal function or progressive impairment of ipsilateral function
 - stones or infection, or, rarely, causal hypertension
-

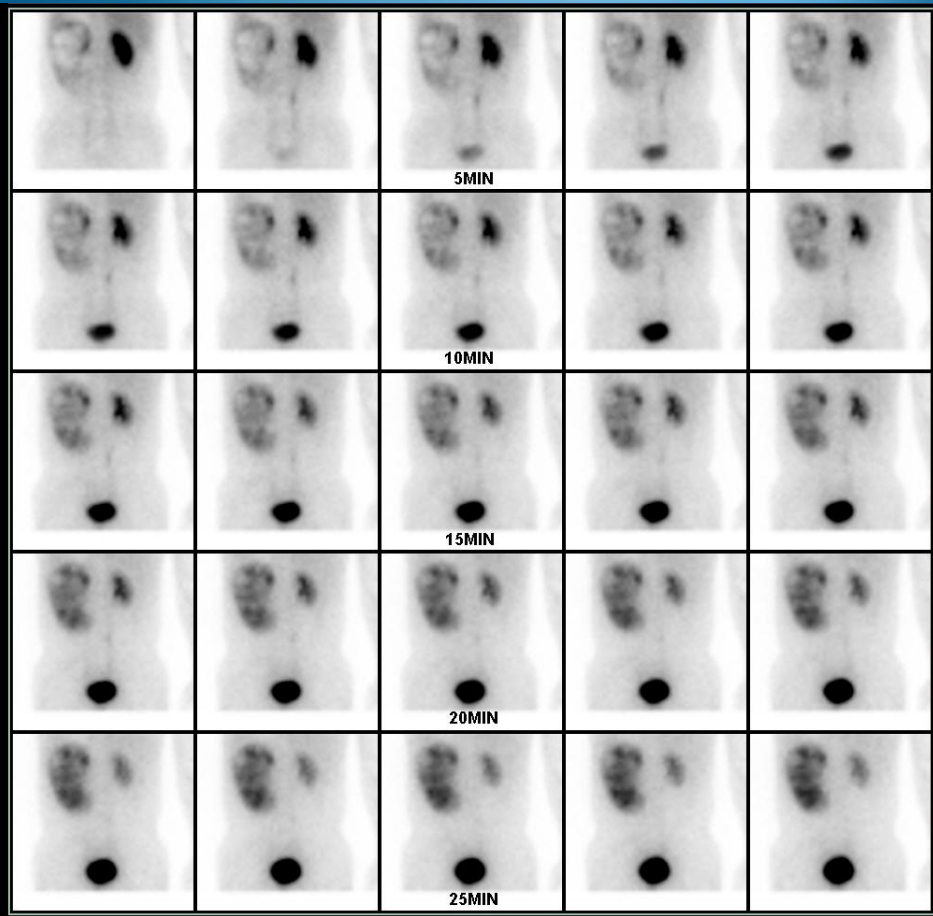
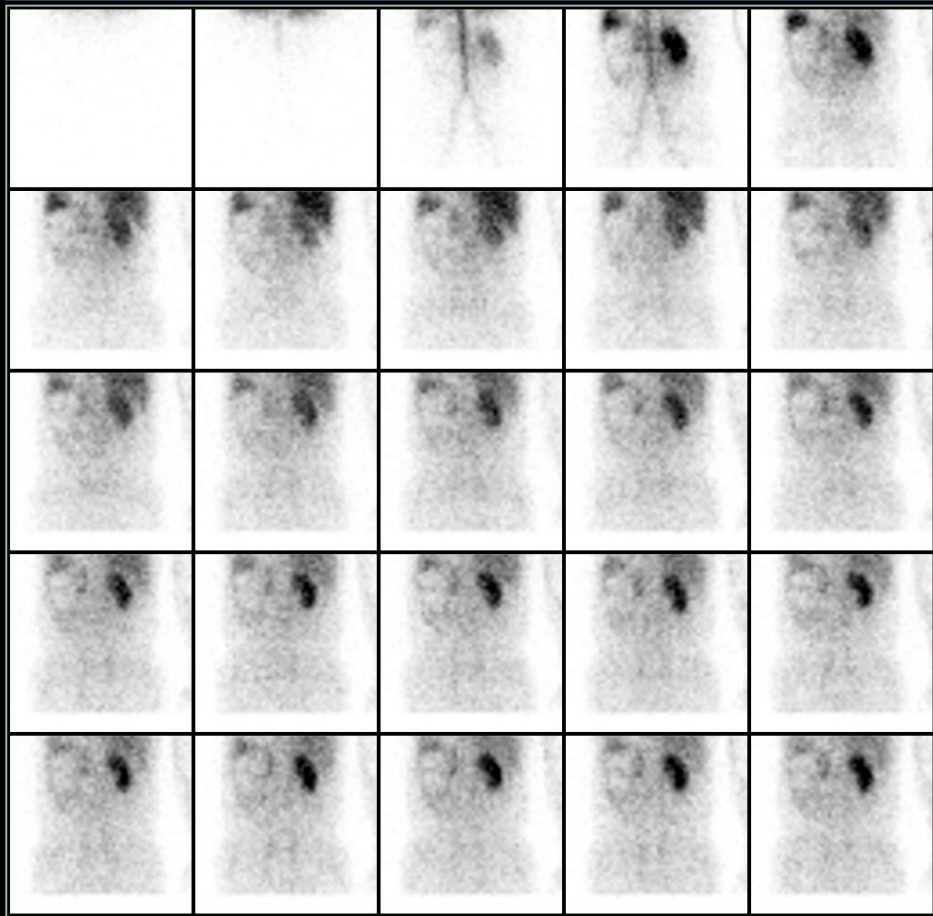
CASE 1

25세/남

Lt flank pain로 타병원에서 시행한 검사에서 UPJO로
진단받고, 수술적 치료위해 전원

ROK Air Force Academy Graduate





Outside MAG3 renal scan

5년 후

Lt flank pain after heavy drinking

Lt flank pain or discomfort 빈도 증가

ROK Air Force Fighter Pilot

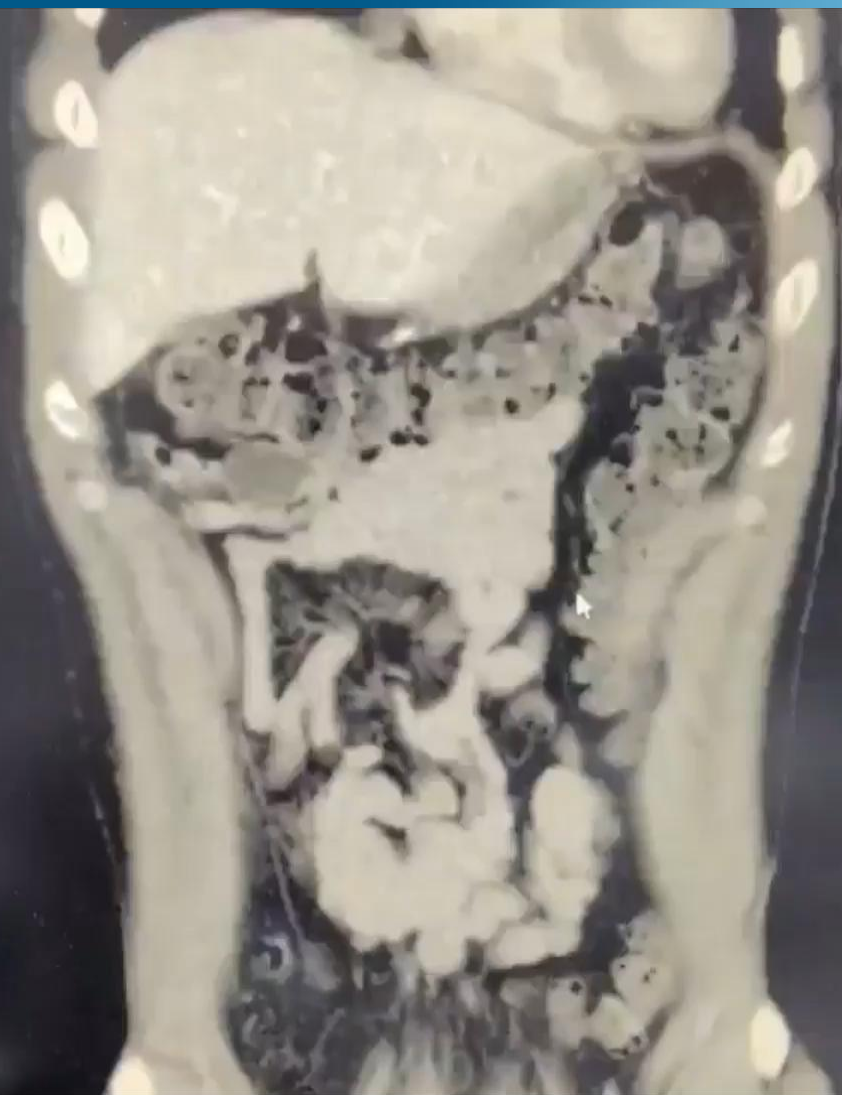


Table of Patient Parameters

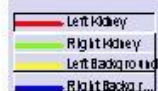
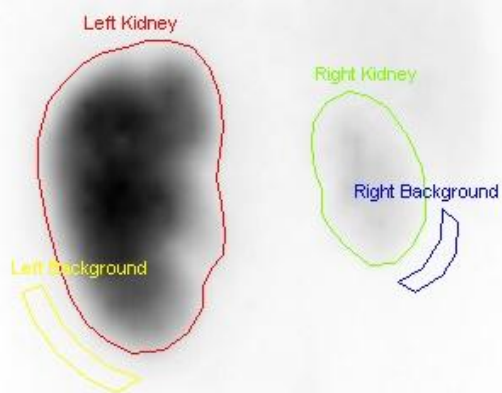
Parameters	Values
Renal Protocol	Generic (None)
Kidney Depth Method	Standard
Patient Name	LEE SOONHO, M29
Patient ID	47563810
Sex	Male
Age	29
Height	165.8 cm
Weight	61.6 kg
Body Surface Area	1.68 m ²
Reference BSA	1.73 m ²
Split Uptake Interval (min)	1.0 - 2.0

Table of Result Summary

Parameters	Left	Right
Time of 1/2 Max (min)	> 20 min	

Renal(LASIX) [Results] 12/13/2019

1



Kidney



Follow-up MAG3 renal scan

Symptom aggravation

Preserved renal function

Partial obstruction on renal scan

Tiny renal stone



Surgery vs Observation

6개월 후, Lt robot-assisted pyeloplasty

수술 후 1개월 후, DJ stent removal

다음 날 Lt flank pain, fever로 ER visit → Lt PCN
insertion

PCN 제거하고 부대 복귀 원함

2주 후 Lt DJ stent insertion & PCN removal



2개월 후 Lt flank pain, fever로 타원 ER visit → Lt
PCN insertion



Lt DJ stent removal, 한달 후 Redo-pyeloplasty 계획

보름 뒤 결혼식 예정

Acquired-Extrinsic

Retroperitoneal fibrosis

☞ Etiology

- idiopathic in 70% of cases, increasing evidence of immune-mediated periaortitis
- identifiable etiology in 30% of cases, including drug, malignancy

☞ Management

- initial management, followed by attempt to search for etiology
 - medical management : steroid therapy in idiopathic cases
 - surgical management : ureterolysis
-

CASE 2

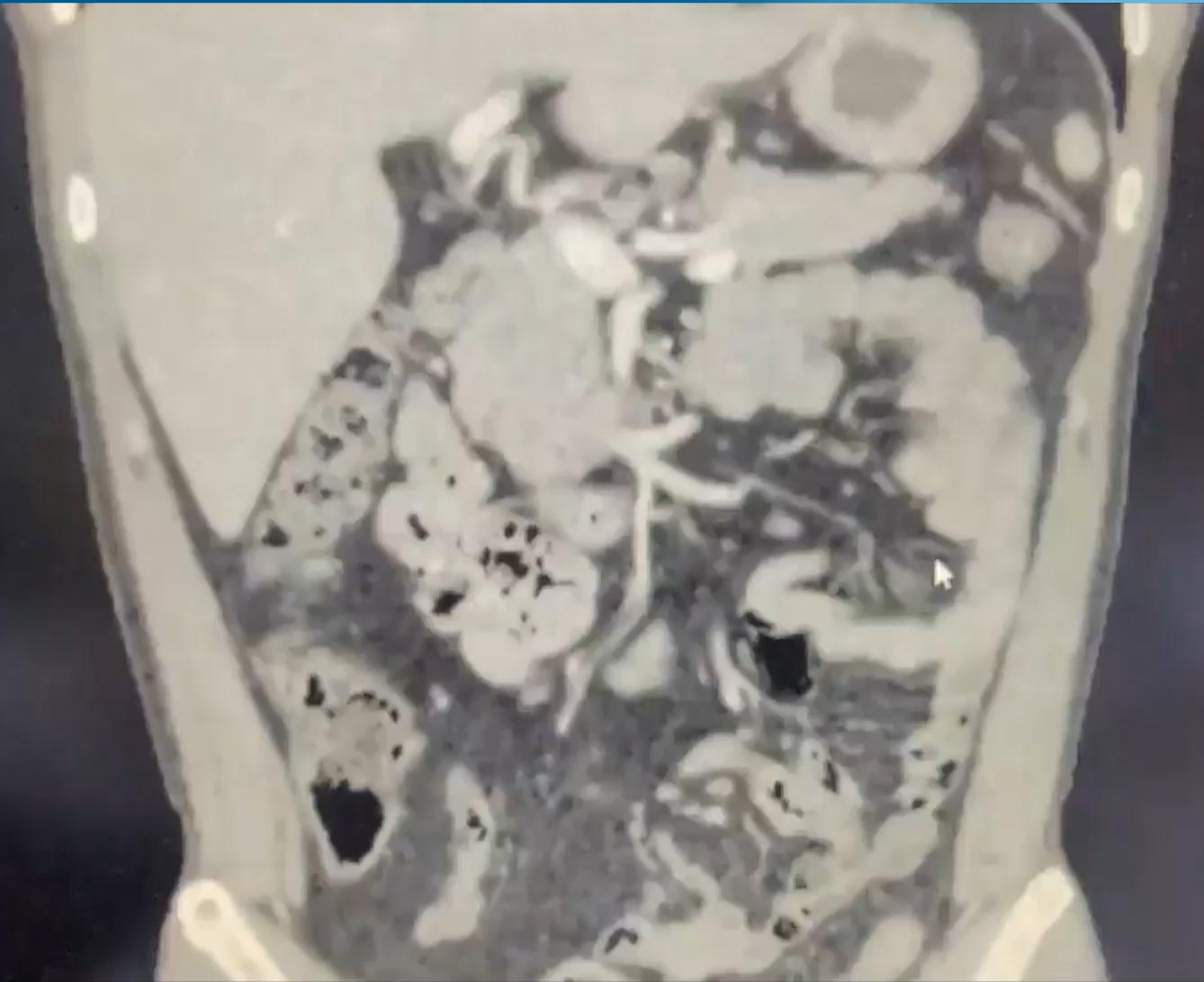
48세/남

Lt flank discomfort, 구역감으로 타병원에서 시행한
검사에서 Lt renal pelvis tumor 의심하에 전원

Outside CT 자문판독 : r/o Urothelial carcinoma vs

IgG4-related retroperitoneal fibrosis →

Recommend endoscopic biopsy



Cystoscopy : No abnormal mucosal lesion in bladder,
no lateralizing hematuria.

Lt RGP : Lt proximal ureter slightly narrowing, no
definite filling defect

Lt URS : No abnormal mucosal lesion in Lt ureter,
renal pelvis, upper calyx



RHE : IgG4 확정하기는 어려움. empirical steroid trial

2개월 후

RHE : IgG4 확정하기는 어려움. empirical steroid trial

→ 반응 없을 경우 URO 진료 다시!! (for malignancy
감별)

CT, Urography : No change of enhancing soft tissue mass along Lt renal pelvis and ureter

PET/CT : Hypermetabolic mass along Lt renal pelvis and ureter w/ hydronephrosis → r/o IgG4-related disease vs Primary ureter cancer or lymphoma involvement

2개월 후 Laparoscopic biopsy 계획

Biopsy 1일 전 leg pain으로 ER visit

APCT : Increased extent of enhancing mass along Lt renal pelvis and ureter. Multiple LAP. Multiple low attenuating lesions in liver → r/o Lymphoma involvement > Urothelial carcinoma with multiple metastasis



Lt supraclavicular LN biopsy : METASTATIC

CARCINOMA, SUGGESTIVE OF METASTATIC

RENAL CELL CARCINOMA, NON-CLEAR CELL

TYPE

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☞ Hydronephrosis > Obstructive

uropathy > Obstructive nephropathy

☞ **UPJO** : To treat or not to treat, that is the question.

☞ **Retroperitoneal fibrosis** : Active biopsy to rule out malignancy

Thank you for your attention!

