

Urinary system (Imaging)

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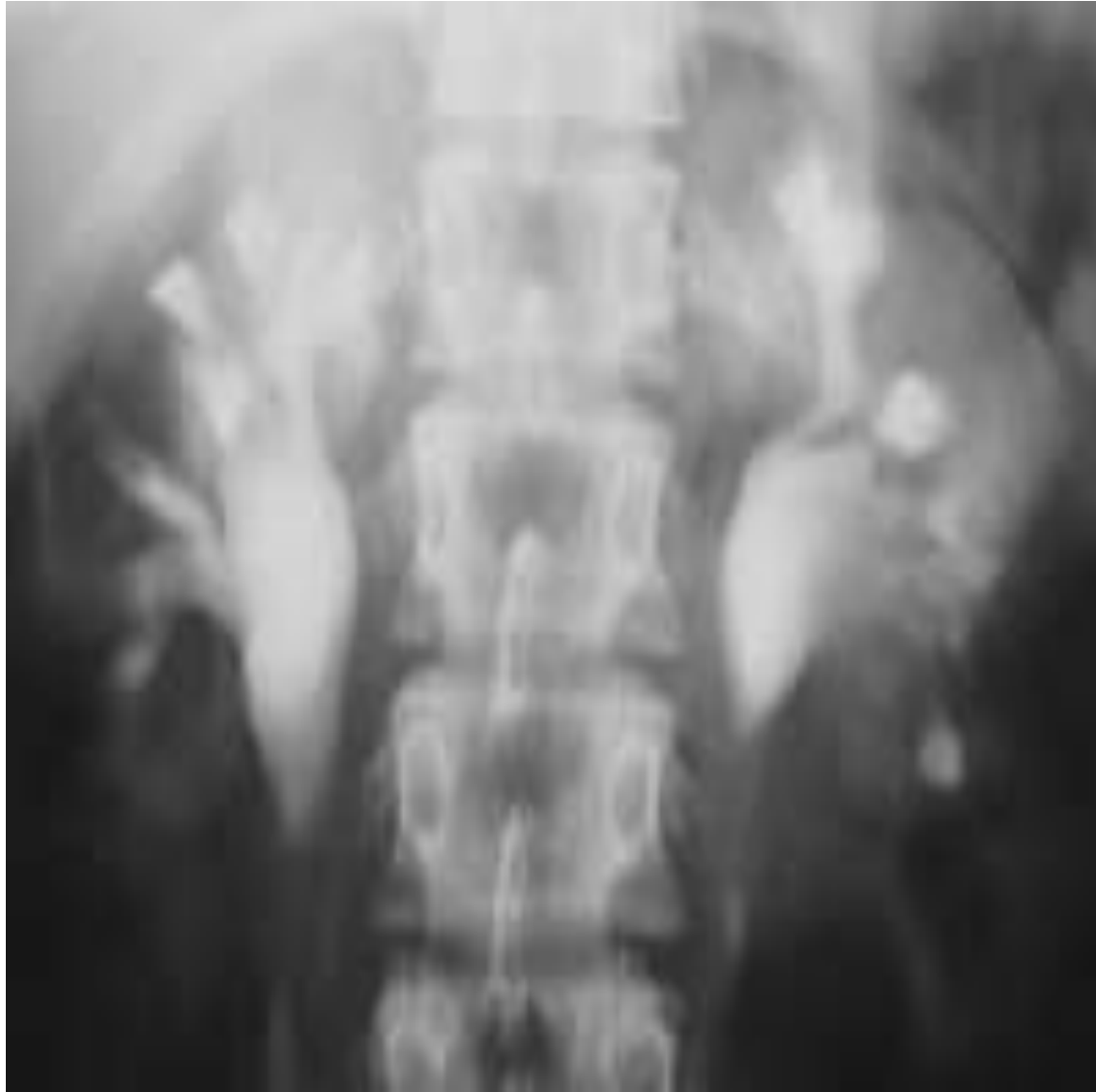
Nephrotomogram

- Absence of nephrotomographic enhancement within the lesion :
suggest a **simple cyst** ,
parenchymal **beaking**
(margin of unenhanced tissue)

Renal cyst : cortical break



Reflux nephropathy ; clubbing calyces , parenchymal loss



To be continued in next
lecture

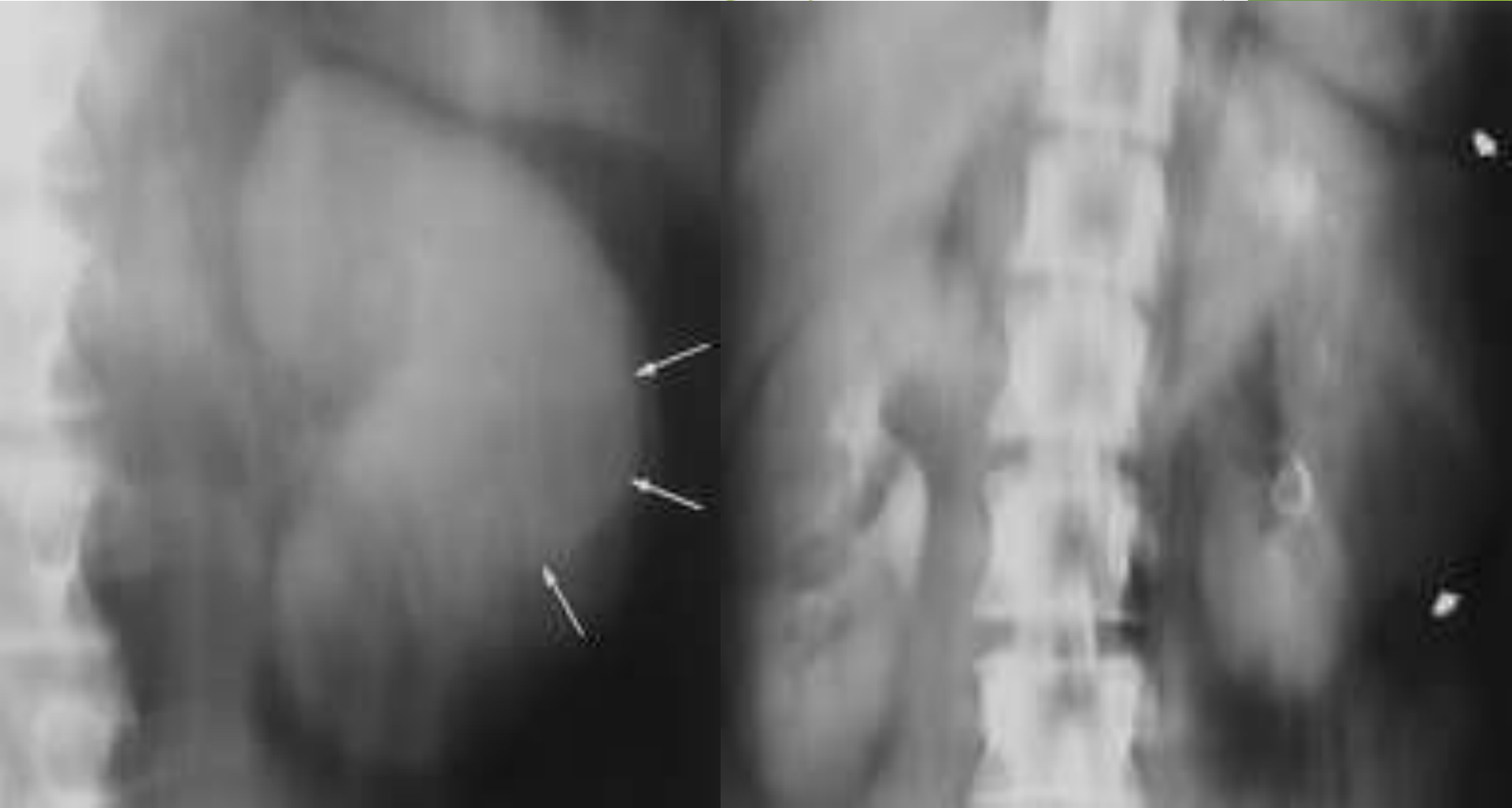
lvp continued....

Mass

- ▶ Increase parenchymal thickness
- ▶ Calyceal distortion
- ▶ Double contour at tomography
- ▶ CT is suggested for solid lesion

Renal cell carcinoma

mass mid portion of LK ,
distortion collecting system



Position of kidney

- ▶ RK is lower than LK (liver)
- ▶ Vertical axis parallel upper 1/3 of psoas

▶ Alteration of axis and position:

- * Congenital renal anomaly
- * Abdominal or RP mass

Horseshoe kidney



HORSESHOE KIDNEY





Renal cell CA
mass upper pole
of RK
axis deviation
parallel with
psoas m.
distortion
collecting
system

RCC lower pole of LK



Pyelographic and ureteric image

- ▶ IVP , CT urogram good for evaluation of collecting system , urothelium-line surface:

- * TCC urinary tract

- * Pyelitis cystica

Transitional cell CA ; renal pelvis irregular papillary filling defect



Pyeloureteritis cystica



Calyces

- ▶ Compound calyces : polar region
- ▶ Simple papillae , classic calices : interpolar
- ▶ Obstruction :
 - * Round forniceal margin ,
 - * Loss of papillary impression ,
 - * Clubbing calices

Left distal UC with obstruction



Papillae

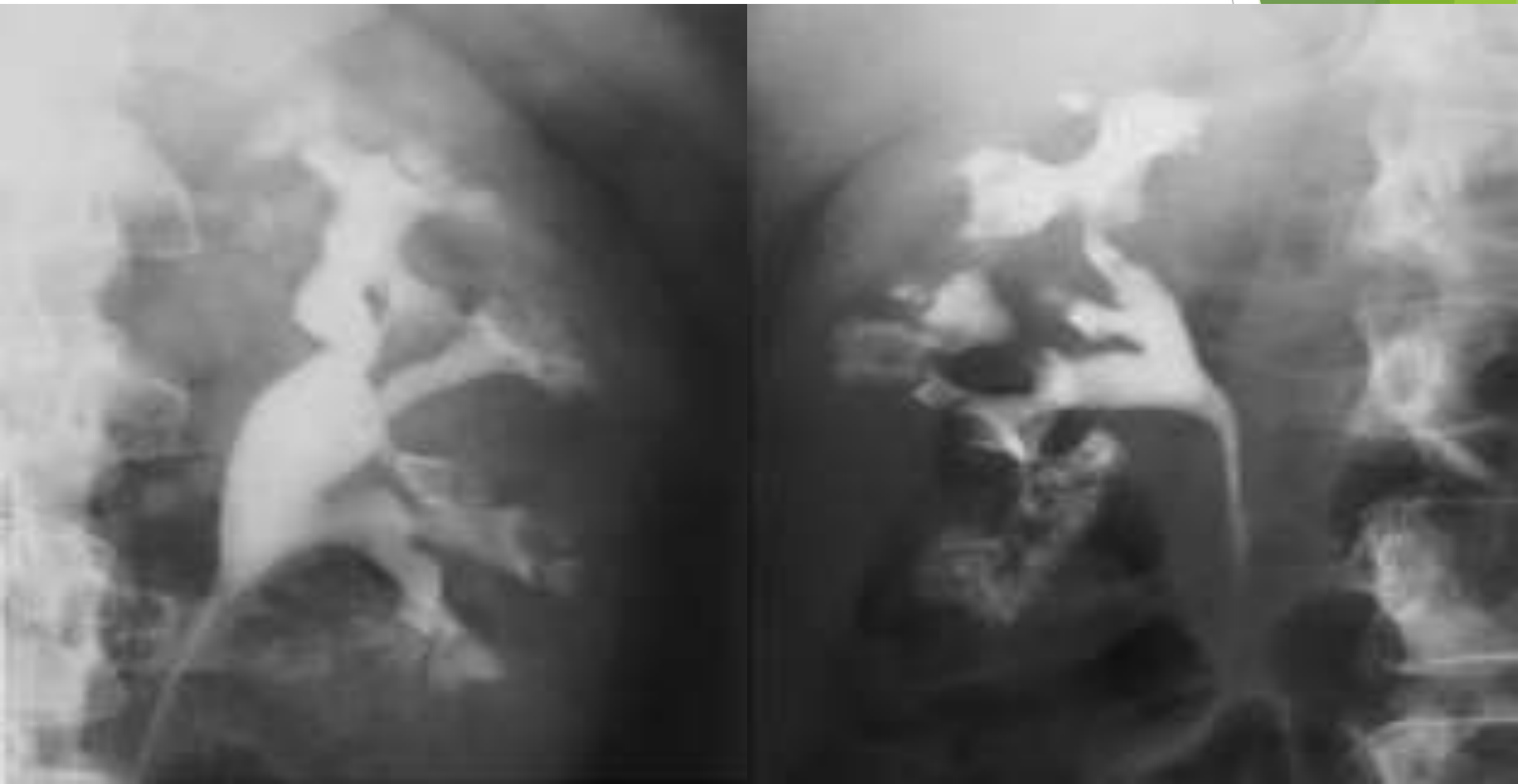
- ▶ Papillary blush
- ▶ Contrast within papillae
- ▶ Tubular ectasia :

Medullary sponge kidney

Papillary blush



Medullary sponge kidney; tubular ectasia
microscopic hematuria , cavity fill with CM
“ growing calculus sign “



Renal papillary necrosis ; sickel cell anemia, analgesic abuse



Aberrant papilla , benign



Calyceal diverticulum with stone



Phantom calix

- ▶ Usually number of calices 7-14
- ▶ Phantom calix :
 - * Benign -TB
 - * Malignant process -Oncocalix

Tuberculosis ; phantom calices lower pole
LK , moth-eaten calices
D/DX TCC



TCC ; Oncocalyx (tumor filled calix)
upper pole of LK



Impression on collecting system

- ▶ **Vascular compression**
- ▶ **Renal sinus cyst**

Vascular impression



Renal sinus cyst , (not hydronephrosis)
narrow displacement of collecting system
and renal pelvis

