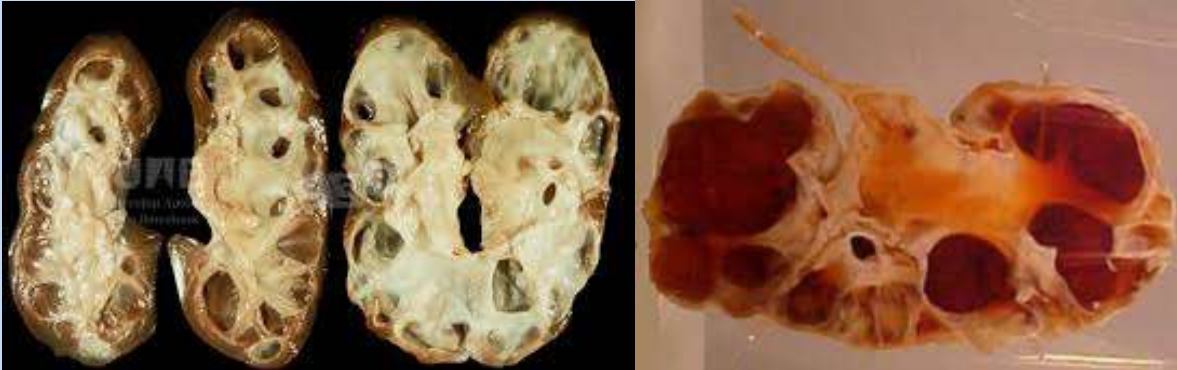
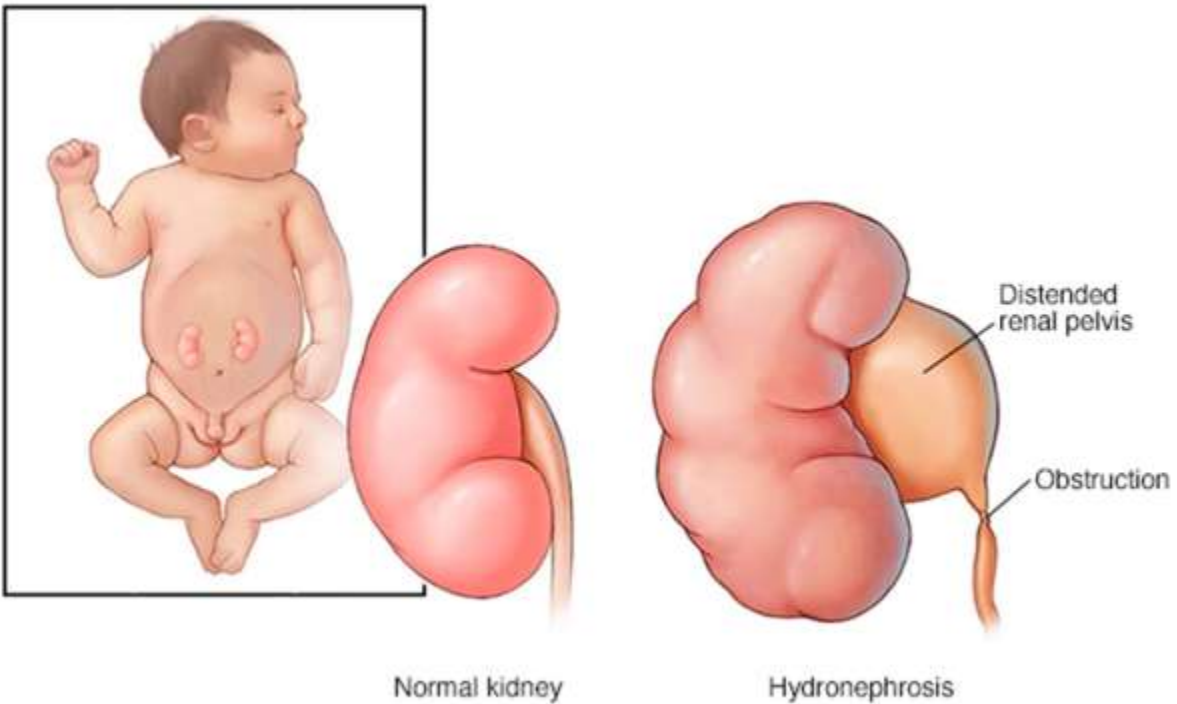


XIX. Diseases of the Urinary System

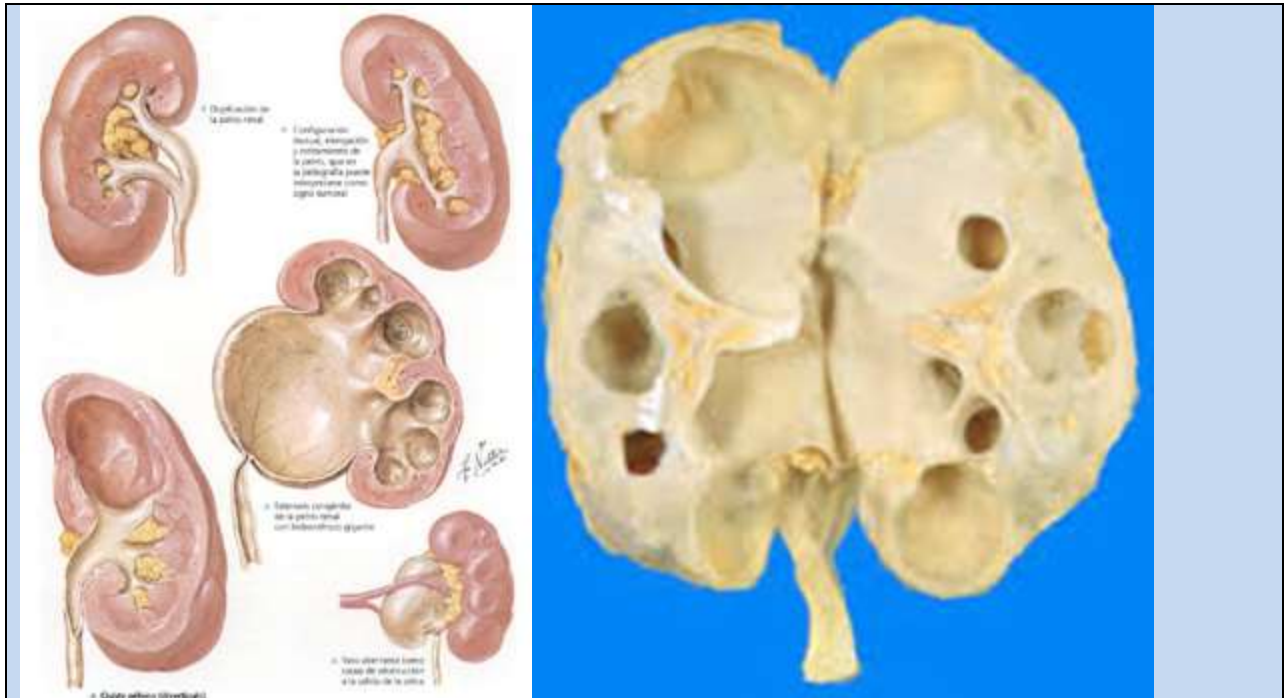


Hydronephrosis IV-1.03.

Kidney	Size:	<ul style="list-style-type: none"> • Is enlarged (as a whole) but actually due to marked dilatation of calyces and pelvis
	External surface:	<ul style="list-style-type: none"> • Lobulated appearance
	Surface:	<ul style="list-style-type: none"> • Shows atrophy of renal tissue
	Renal tissue:	<ul style="list-style-type: none"> • Atrophied and thinned out cortex (bag-like) • Dilated, distended and flattened
	Calyces Renal pelvis (& calyces):	<ul style="list-style-type: none"> • Dilated • Saccular distension

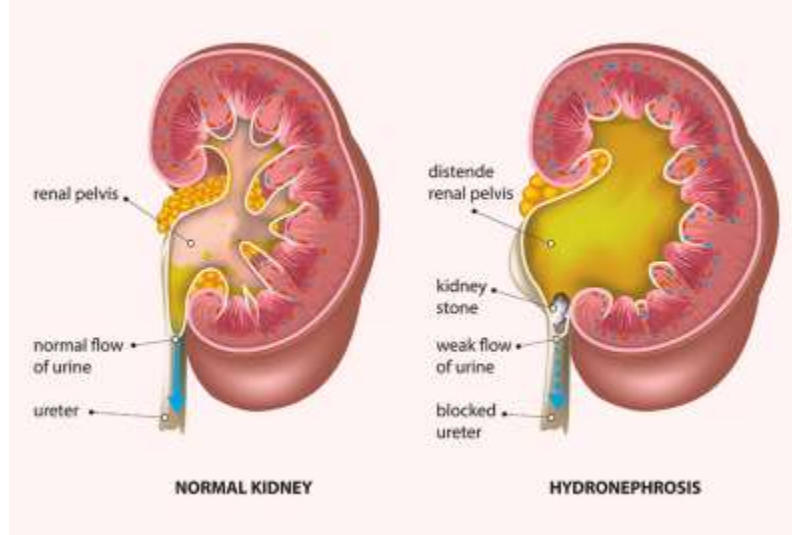


N.B.:			
<ul style="list-style-type: none"> The kidney appears as if transformed into a thin fibrous sac. Hydronephrosis is dilatation of renal pelvis and calyces associated with destruction (atrophy) of the kidney substance. 			
The cause is urine-obstruction (unilateral or bilateral):			
I- Obvious (organic):			
1. In ureter (and renal pelvis):			
	1. Calculus		
	2. Stricture after	<ul style="list-style-type: none"> Hematogenous infection. Calculosis. Tuberculosis. Bilharziasis. 	
	3. Pressure from outside (tumours; pregnancy).		
	4. Aberrant renal artery.		
	5. Kinking by a movable kidney.		
	6. Congenital folds.		
	7. Stenosis.		
	8. Calculosis.		
	9. Tumours.		
2. In urinary bladder:			
	1. Calculus.		
	2. Tumours.		
	3. Bilharziasis.		
3. In urethra:			
	1. Stricture	<ul style="list-style-type: none"> Gonorrhoeal. Otherwise. 	
	2. Enlarged prostate.		
	3. Congenital folds.		
	4. Calculus.		
	5. Phimosis.		



II- Not obvious (functional or idiopathic):

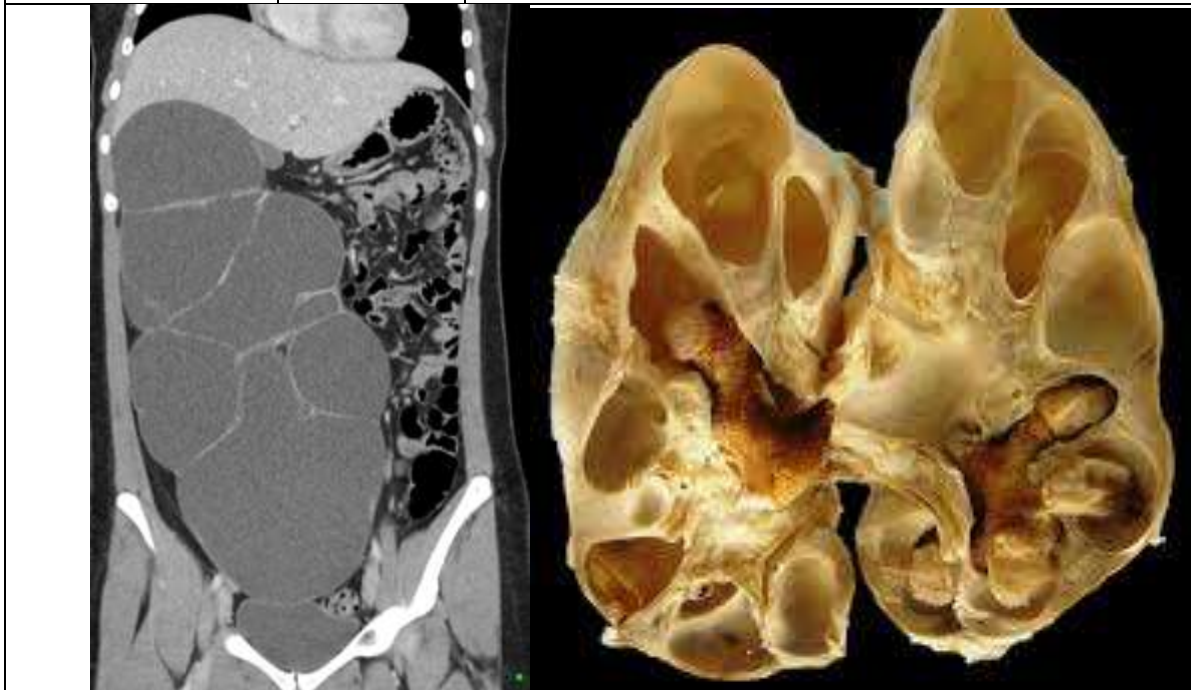
1. Neuromuscular incoordination.
2. Tabes dorsalis.
3. Injury to the spinal cord.
4. Over-action of the sympathetic over the parasympathetic → achalasia of the pelvi--ureteric sphincter.



- **At first** → simple dilatation of renal pelvis and calyces (accompanied by tubular atrophy and fibrosis).
- The condition may be complicated by infection → pyonephrosis and pyoureter.

Hydronephrosis and Hydroureter

<i>Kidney:</i>	<ul style="list-style-type: none"> • False appearance of enlargement • Actual diminution of kidney-tissue proper • Atrophy of cortex
	<i>Calyces:</i> <ul style="list-style-type: none"> • Large • Dilated and cystic • Communicating (cystic sacs): •
	<i>Cysts:</i> <ul style="list-style-type: none"> • Large sacs • Thin-walled • Fibrous
<i>Renal pelvis (and calyces):</i>	<ul style="list-style-type: none"> • Dilated and distended
	<i>Ureter:</i> <ul style="list-style-type: none"> • Dilated



N.B. 1

This is a pelvic type of hydronephrosis.

Varieties of hydronephrosis**1. Renal :**

- Slight dilatation and much fibrosis and thickening.
- Usually due to calculosis

2. -renal:

- Dilatation and fibrosis are equal (a very common type).
- Usually due to an organic obstruction.

3. Pelvic:

- The greatest dilatation.
 - Idiopathic.
-
- The most extreme form of dilatation is caused by gradual and partial (intermittent) obstruction.
 - On the other hand, sudden complete (sustained) obstruction as from ligation of the ureter, may lead to a moderate degree of dilatation followed by Hydronephrotic atrophy,
 - **Clinically**, the symptoms are those of the causative agent; later, on, a mass is discovered on physical examination or/and by pyelography.