

THE GENERAL COURSE OF THE URETER.

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A.—INTERNAL COURSE.

For convenience of description and practical application in diagnosis or surgical intervention, I shall divide the course of the ureter into general and special. A knowledge of the course of the ureter implies an exact view of its topography, or relations to adjacent structures, for frequently it is purely mechanical accidents or relations of topography which are the cause of the pathologic conditions. This is particularly the case in reference to the ureteral pelvis and the proximal and distal ureteral isthmuses. The chief ureteral therapy is applied to its proximal and distal ends; hence exact knowledge of its anatomical course is a first essential for diagnosis and surgical intervention. The ureter lies in various planes in its general course. We will assume a frontal or transverse plane, and a dorso-ventral or sagittal plane to locate the curves or flexures of the ureter in its course. It describes in its general transverse frontal plane two flexures, viz.: (a) a renal flexure or flexura renalis ureteris, which is produced by the medianward projection of the distal renal pole; (b) a pelvic ureteral flexure or flexura pelvina ureteris, which is produced by the distalward movements of the viscera, due to erect attitude and the curves of the bony pelvis. The course of the whole ureter's cast on the planum transversum would resemble an italic letter *f*. It describes in its dorso-ventral plane curves resembling those of the vertebral column. The course of the whole ureter's cast on the dorso-ventral plane would resemble the letter *S*. The following table shows the general ureteral course in its transverse and dorso-ventral planes :

General course of the ureter.	{	1. Planum Transversalis or Frontalis.	{	(a) Flexura renalis ureteris. (b) Flexura pelvina ureteris. (c) The cast of the ureter on this plane resembles the italic letter <i>f</i> .
		2. Planum dorso- ventralis or sagittal plane.	{	(a) Flexura iliaca ureteris. (b) Flexura pelvina ureteris. (c) The cast of the ureter on this plane resembles the letter <i>S</i> or the curves of the vertebral column.

The ureter can be deviated from its general course in certain segments for six inches without loss of integrity. I found in measuring one hundred and fifty ureters that the average length was eleven and one-half inches. The left ureter was about one-