tissue demonstrated a moderate phagocytosis of the cellulose by giant cells and a dissolution of same in the areas of inflammation. A marked hyalinization of cotton fibers was frequently noted, and this was interpreted as denoting partial disintegration. The destruction of the cellulose was greater in the peritoneal cavity than in the muscles or subcutaneous tissue. Studies are now in progress to determine the absorbability of natural silk before and after treatment with various substances.

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Reconstruction of the Ureter by Means of Bladder Flaps.

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(Introduced by C. M. Van Allen.)

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After operations on the lower one-third of the ureter, strictures usually form despite the most careful efforts to prevent them. Considerable clinical and experimental data indicate the difficulties of securing a satisfactory ureterovesical anastomosis and describe methods which it was hoped would solve the problem.

It seemed to us that a modification of the Janeway gastrostomy would offer a procedure for replacing the resected lower portion of the ureter with a tube constructed from the bladder. The literature revealed that Boari conceived a similar idea but his observations were limited to one dog which lived in apparent good health for 4 years after the operation but was never autopsied.[1]

Various procedures were tried, each consisting essentially in turning a flap of bladder wall and constructing a tube of it into which the ureter was placed. The most satisfactory type for the preservation of blood supply to the bladder tube or pouch was to turn a flap from the fundus downward, having its broadest portion attached to the base of the bladder and preferably at a point entered by large blood vessels. Likewise, it was desirable to have the base of the flap slightly broader than the free end.

In dogs, this procedure afforded an easy transplantation of the ureter even after a resection of about 5 cm. of the lower part. If

[1] Boari, A., *Chirurgia dell' uretere. Con prefazione del Dott I. Albaran,* 1900, **14,** 444; *Contributo sperimentale alla plastica dell uretere, Atti della Aecad. delle scienze mod. e naturali di Ferrara. Seduta* 27 *maggio* 1894.

a greater length of ureter were removed, the flap could be turned from the base upward towards the fundus as advocated by Boari. In this instance, however, the blood supply to the flap was less abundant, and the position of the artificial tube or pouch varied with the size of the bladder.

Although one could easily maintain the integrity of the bladder tube and could easily effect an anastomosis, a stricture almost invariably formed at the junction of the ureter and the bladder, which in itself defeated the purpose of the operation. Therefore, studies were directed toward finding a suitable type of anastomosis between the normal bladder and normal ureter, and this procedure[2] was applied satisfactorily to uniting the ureter with the tube constructed from the bladder.

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Ureterovesical Anastomosis: An Experimental Study.

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Due to the formation of strictures in the ureter when transplanted into a tube constructed from the bladder,[1] studies were directed toward finding a satisfactory method of anastomosing the normal ureter with the normal bladder. Several modifications of the Coffey type of implanting the ureter into the sigmoid were employed.[2]

Our most satisfactory anastomosis was obtained by the following technic. The ureter was cut across near the bladder between 2 silk ligatures. The bladder was opened anteriorly. The proximal portion of the ureter was led through the posterior bladder wall at about the same level and slightly medial to the normal entrance of the incised ureter. This was easily done by using a large curved, non-cutting needle which carried through the loose ends of the ligature previously tied around the proximal end of the cut ureter and which then could be used to pull the ureter into the bladder cavity

[2] Spies, J. W., Vermooten, V. D., and Wilson, C. S., PROC. SOC. EXP. BIOL. AND MED., 1933, **30**, 426.

[1] Spies, J. W., Johnson, C. E., and Wilson, C. S., PROC. SOC. EXP. BIOL. AND MED., 1933, **30**, 425.

[2] Coffey, R. C., *Brit. J. Urol.*, 1931, **3**, 353.