

fully into the literature of the subject, or even to mention all experimental and clinical work that has been done in this direction. I would refer those specially interested to a paper entitled, "Anastomosis of the Ureters and the Intestine," by Peterson, of Ann Arbor, formerly of Chicago. Peterson's conclusions refer to the exceedingly high mortality of the operation both in animals and in man; to the difficulty of technique, and to the very great danger of renal infection following the operation. He concludes, in fact, that the operation is unjustifiable in cases of exstrophy of the bladder, vesico-vaginal or uretero-vaginal fistula, or of malignant disease of the bladder, but he favors the performance of what is known as "Mady's Operation," viz.: the transplantation of a vesical flap, including the urethral orifices, into the descending colon. He argues that there is no valve guarding the vesico-urethral orifice, and that neither the circular muscular layer of the ureter, nor the bladder muscles themselves, act as a sphincter.

As a result of my experience of these four cases in the *human subject*, I have reached widely different conclusions, and, in reply to objections, I would point out that the operation which I have described includes the natural termination of the ureter on the bladder mucous membrane, and that whatever virtue there may be in this peculiar termination is retained when the transplantation is completed by my method. Moreover, it is not possible for me to see what advantage there can be to the patient in retaining the trigone of the bladder itself. The operation as described above does not involve any section of the ureter, and maintains its circulation complete to the point at which its vessels anastomose with those of the bladder, thus obviating the danger of sloughing.

In one part of his paper he points out that any portion of the ureter projecting into the rectum will in any event slough off. Doubtless this may be true when the ureter is divided at any point in its continuity, but I am able to prove by my cases that when the papilla, with a portion of the bladder tissue surrounding it is implanted into the rectum, such sloughing does not occur, but the papilla remains (Fig. 2, B), and its mucous membrane in process of healing becomes continuous with that of the rectum, thus perpetuating a papilla similar to that by which all mucous ducts terminate upon a mucous membrane, such as the bile duct and the salivary ducts. I argue, moreover, that such a papilla *does* constitute a real and efficient valve; that it presents a very great obstacle to the spread of septic infection up the ureters, and I am disposed to think that, in Case No. 4, the rapidly fatal ascending infection might not have occurred if I had made the implantation without the use of the catheters in the ureters. Theoretically, the presence of the catheter prevents the action of the papilla-valve, and so fully