

skin and fascia, which does not possess any contractile muscular action. Again, the presence of hairs in the inturned skin tends to the formation of calcareous deposits; the macerating and irritative effect of the urine induces inflammatory action in the flap, and the absence of any sphincter-like muscle necessitates the constant use of a pad to block the outlet of the built-up bladder. Hence Rutkowski substituted the muscular structure (bowel) for the skin flap, but his operation presupposes a procedure risky, to say the least, viz., intestinal resection.

In view of these varied objections to the present status of reparative surgery of the exstrophed bladder, it seems to me that the possibility of replacing the skin flap of Wood, or the bowel flap of Rutkowski, with a flap of normal bladder tissue, if it could be carried out, would be preferable, and with this object in view I undertook some experiments on animals, to ascertain whether it would be feasible to transplant the bladder of one animal into the body of another. These experiments were successful. The method was as under:

Opening the body on one animal—a dog—I removed a piece of the bladder wall and placed it in warm boracic solution, and made a straight incision in the abdominal fascia of another animal (both being on the operating table at the same time) and down to the deep layer of superficial fascia. I separated these two layers, namely, the deep and the superficial of the superficial fascia, and transferred the excised bladder wall to this space m.m. downwards, interposing a sheet of gold foil between the m.m. and the deep layer of superficial fascia, the object being to prevent union of this surface with the subjacent tissue, and the gold foil and bladder tissue were sutured to the integument and fascia by means of catgut. The results were perfectly satisfactory, and demonstrated that it was possible to transplant bladder tissue to the superficial fascia.

In view of the above results, it seems to me that one is justified in suggesting the following procedure in *Ectopia Vesicæ*:

Transplant a portion of bladder wall of, say a sheep, to the lower lateral abdominal fascia of the patient. After a period of seven or eight days, the union of the two tissues is sufficiently strong to allow a plastic operation, whereby a skin flap with the bladder attached may be swung over upon the extruded bladder,