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Kim J[1], Smith A L[1], Baxter C[1], Staack A[1], Raz S[1]
1. *UCLA*

TRANSRECTALTRANSSPHINCTERIC REPAIR OF RECTOURINARY FISTULA WITH DARTOS FLAP

Synopsis of Video
This video is a detailed illustration of the modified one stage transrectal transsphincteric approach to rectourinary fistulas using dartos flap for a patient who developed rectourethral fistula after robotic prostatectomy.

Hypothesis / aims of study
Rectourinary fistulas resulting from prior surgery or radiation pose special challenge to reconstructive surgeons. The transrectal transrectal approach provides optimal surgical exposure with minimal morbidity. For recurrent or irradiated fistulas, we performed a modification to this technique by adding a dartos flap to provide additional coverage. We present the detailed illustration of our modification and long term follow-up utilizing this approach.

Study design, materials and methods
We reviewed the operative technique and results of 14 male patients with rectourinary fistulas who underwent transanal transrectal repair from 2003 to 2008. Similar to previously described York Mason procedure, the patient is placed in jack knife position with the anus exposed by taping the buttocks apart. Incision is made from the coccyx down to the anus, tagging both sides of the anal verge, anal sphincters, and the levators to facilitate symmetric closure of the incision. Posterior rectal wall is incised. Fistula tract is circumferentially released from the anterior rectal wall, and the defect is closed using interrupted 2-0 vicryl sutures. Perirectal fat is mobilized and interposed over the closure. Proximal and lateral rectal wall flap is created and advanced distally to cover the fistula closure. Posterior rectal wall is closed in two layers of 2-0 vicryl suture. Dartos flap is then harvested by exposing the scrotum which is incised at the posterior midline. The dartos flap is then transferred under the perineum and tacked over the fistula closure. Copious antibiotic irrigation is used during the procedure. The sphincter and the levator muscles are meticulously reapproximated using the previously tagged sutures as guidance to maintain fecal continence.

Results
Mean age was 68 (40 – 87) with mean follow-up of 27 months (3 – 48). Of the fourteen cases reviewed, 13 rectourinary fistulas were caused by treatment for prostate cancer: cryotherapy (4), external beam radiation therapy (1), brachytherapy (3), retropubic radical prostatectomy (3), and robot assisted radical prostatectomy (2). One fistula occurred from pelvic gunshot wound. There were 8 recto-prostatic fistulas, 5 recto-urethral fistulas, and 1 rectovesical fistula from pelvic trauma. 1-staged repair without bowel diversion was employed for all but 2 repairs that required colostomy. 12 were successfully corrected using this surgical approach. Recurrent fistula was observed in one salavage cryotherapy patient who was cured after second transrectal transsphincteric repair. One patient with prior radiation developed severe urethral necrosis to the pubic bone with a large defect that could not be bridged and required permanent colostomy and suprapubic tube diversion. All patients maintained fecal continence. Anal stenosis was not noted.

Interpretation of results
Transrectal transsphincteric technique for challenging rectourinary fistula repairs have high success rate with minimal morbidity.

Concluding message
Rectourinary fistulas can be effectively managed by 1-stage transanal transrectal approach. Bowel and urine diversion should be considered in patients with poor tissue integrity from prior radiation or salvage cryotherapy.

Specify source of funding or grant	**None**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Internal Review Board at UCLA**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**