

# 13 PROBLEMS, COMPLICATIONS AND HOW TO GET OUT OF TROUBLE

A number of complications may occur during the course of repair, and some of these will be described as lessons in learning how to cope.

## Are Things Not Going Well?

- Could exposure be improved by larger episiotomies or vaginotomies? Or by more head-down tilt?
- Is the lighting the best that it could be?
- Is the patient slipping down the table? Shoulder rests are essential for a very steep Trendelenberg position, but many operating theatres do not have them. Provided that the patient is placed with her buttocks well over the table with her thighs well flexed, it is possible to obtain 20% of head-down tilt without the patient moving down. If she has slipped down, the Auvards speculum will not be sitting in the vagina easily, butting against the operating table making access difficult to impossible. Put the head of the table up again, push the patient down the bed, secure the shoulder pads and then place her head down.
- Are you using an assistant well? An unfamiliar assistant should not do anything until asked, and then keep doing what you ask until asked to change. If you have a regular assistant, he or she will be able to anticipate your needs. The most useful skill is to be able to pick up the tip of a needle for the surgeon deep in the vagina (5/8-circle needles make it much easier for surgeons to do this themselves).
- Try to use your assistant as little as possible, and keep the vagina clear of suction devices and instruments. We prefer mostly swabbing ourselves to clear blood and do not use suction as a routine. If the reflected vaginal flaps are sutured up, there is much less for someone to hold. The vagina is a narrow operative field and the fewer instruments there the better.

## An Injured Ureter

One of the most embarrassing mishaps is the accidental injury of a ureter at surgery. This has occurred to almost every fistula surgeon—not just beginners. This accident usually happens when mobilising the bladder in the region of the cervix. Sometimes, the injury is recognised immediately, or it may be noticed at the end of the repair when clear urine is seen escaping.

This accident can be prevented by identifying and catheterising the ureters at the earliest opportunity during a repair. This is usually done before making any incisions, other than relaxing episiotomies or incising vaginal scar, but sometimes it is necessary to begin mobilisation before

there is any chance of visualising the orifices. Here, the ureters are at risk, so it is important to avoid straying into the bladder wall and always to keep close to the cervix or stay under the vaginal skin.

It is still possible to cut the ureter with the ureteric catheter in place. If the catheter has a metal stylet, it is advisable to keep it in place during dissection so that it can be felt and so that, if the ureter is cut, it will not be transected. Most catheters do not come with a metal stylet, and on a few occasions surgeons have cut through the ureter and catheter.

Ureteric catheters are often difficult to obtain and many surgeons have to operate without them. If this is the case, the important thing to do is identify the ureter and if it is possible to hold a ureteric probe in the ureter while doing the dissection and suturing, have your assistant hold the probe tightly. I know of at least one surgeon who lost a ureteric probe in the ureter and couldn't get it out. An alternative to a ureteric catheter is an infant nasogastric feeding tube. (Figure 13.1) These are thin and soft and often difficult to insert. You will need to thread them through the urethra first and then make sure they are secured in the ureter with a stitch, as they easily fall out.

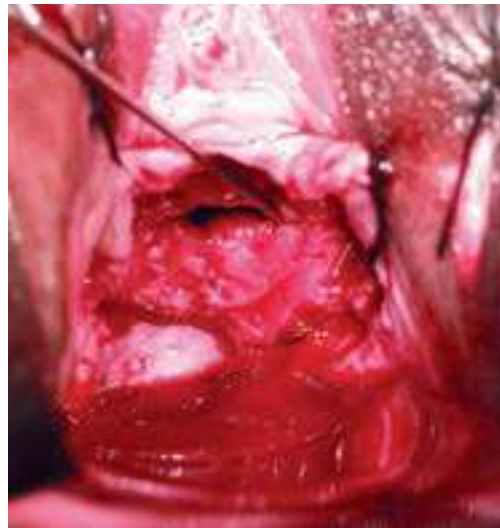
If a ureter is identified as being at risk, it may be possible to protect it without the use of a catheter, but be careful not to drop the probe. (Figure 13.2)

### How to Cope with an Injured Ureter

There are 3 approaches:



**Figure 13.1**  
Nasogastric feeding tubes used as ureteric catheters.



**Figure 13.2**  
A ureter has been identified with a probe, but there was nothing to catheterise it with. The sutures were placed with the probe carefully held in the ureter. Urine was still coming when the probe was removed after the corner was secured.

1. Try to pass the catheter up the real ureteric orifice and 'railroad' it across the gap, then repair the gap, end to end with a fine 3-0 or 4-0 suture.
2. Pass a catheter up the cut ureter and fold it into the repair. A cut ureter is more difficult to catheterise in the bladder wall. The lumen may retract. Use the smallest ureteric catheter available.
3. Suture over the cut ureter, finish the repair and implant the ureter into the bladder through a separate abdominal approach.

## The Ureter and the Ureteric Catheter Are Cut

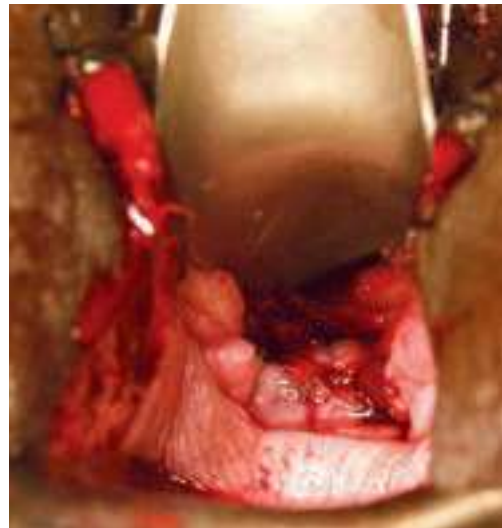
I have observed this twice in the hands of very experienced surgeons. The proximal catheter was impossible to extract. The repair was finished and the abdomen opened, the catheter was retrieved and the ureter was implanted into the vault of the bladder. Once I was given an expired ureteric catheter and it snapped in half in the ureter so half was left inside. That ureter was actually draining outside the bladder, I left it and after a week the tip passed into the vagina and was then easily retrieved.

## A Trap for the Unwary

A double ureter is not that uncommon. (Figure 13.3) I was once caught with double ureters on both sides, so a duplex duplex system. The patient needed four ureters catheterised!



**Figure 13.3**  
A double ureter



**Figure 13.4**  
A high fistula running up a split uterus. A deliberate decision was made to repair the bladder without catheterising the ureters as it was not technically possible. The ureters ended up being ligated and needed to be implanted abdominally.

## Two Instructive Stories

A surgeon had completed a difficult vault fistula repair without the availability of ureteric catheters. That evening, no urine came through the bladder catheter, but urine was draining down the vagina. Next morning, the patient was taken to theatre. A dye test revealed that the repair was sound. It appeared that one ureter had been ligated and the other damaged in the bladder wall. Ideally, the repair should have been taken down and both ureters identified, but this was impractical. The practical step was to perform a laparotomy and implant both ureters. This was done, with a successful outcome confirmed by a 6 month follow up.

I once had a moderate-sized fistula to repair and only two ureteric catheters left in the hospital. The ureters were close to the edge of the fistula, but I decided to close the fistula carefully, doing my best to avoid suturing close to the ureters and in order to save the ureteric catheters for a more difficult case. The patient was dye test negative and dry, but in the recovery area she passed no urine. The catheter wasn't blocked. The patient was hydrated and became very restless with frusemide—and still no urine. I took her back to theatre and when I undid the bladder sutures there were huge gushes of urine. I used the last two ureteric catheters, repaired again and she went home cured.

## A Desperate Situation

A patient presented with a recurrent high intra-cervical fistula visible through a split open cervix. The defect extended below the level of the cervix and was judged unsuitable for a trans-vesical repair. (Figure 13.4) The ureters were seen squirting on the edge of the ragged defect, but after 45 minutes could not be catheterised. The bladder was mobilised off the cervix remnant and the uterus, and the defect was closed with a running suture. The ureters were clearly at risk, but there seemed to be no other option. The dye test was negative, but the patient produced no urine on the table. The abdomen was opened, and both dilated ureters were divided and anastomosed to the bladder. The patient had made a complete recovery when she was seen 3 months later.

## Miscellaneous Mishaps

### Intra-Vesical Bleeding

Bleeding into the bladder should be an exceedingly rare event if you pick up the edges of the bladder with your sutures correctly, incorporating the full thickness of the muscularis. I have seen it occur once in the immediate post-operative period. A surgeon had unknowingly entered the plane between bladder mucosa and muscle. When the patient returned to the ward it was obvious that heavy bleeding was occurring into the bladder by the appearance of haematuria with clots. The repair had to be taken down to secure the bleeder in the bladder wall. Although a re-repair was performed, it broke down and was repeated 4 months later.

Another patient bled into her bladder after a repair of a small simple fistula from an undiagnosed bladder tumour. She had to be transfused and after the bleeding settled she was referred to a urologist.

## An Injured Rectum

At the end of a long day of operating, a surgeon embarked on a difficult repair. In performing vaginotomies to obtain access, he inadvertently opened the rectum. This proved very difficult to repair through all the scar tissue that was present. A colostomy was performed in view of the difficulty. The fistula repair was deferred—it was repaired successfully and the colostomy closed 4 months later.

### Lessons

- Do not start a demanding case late in the day.
- If it is a challenging case, never be afraid to make vaginotomies just below the 3 and 9 o'clock positions.
- If in doubt, insert a finger into the rectum to act as a guide.

## A Missed Rectal Stenosis

Brian Hancock was presented with a patient who had a small circumferential vesico-vaginal (VVF) and a high recto-vaginal (RVF) felt on vaginal examination. The RVF was not palpable on rectal examination. Brian repaired the VVF and, before starting the RVF repair, he examined the patient per rectum. To his horror, he found that high up there was a complete stricture below the RVE. It would have been impossible to carry out the repair transvaginally. A colostomy was performed, followed later by a resection of the rectal stricture. In spite of considerable faecal contamination, the VVF healed and later the RVF as well.

### Lesson

- It is essential to assess any potential rectal injury fully before embarking on a bladder repair.