9.1 Introduction

Between 1972, when I graduated, and 1981, when I went to St. Mark’s Hospital, in London, for a fellowship, I saw only two patients with fecal incontinence. At St. Mark’s, I was taught how to manage this disease; since 1983, I have seen and treated more than 1000 such patients.

The number of incontinent patients is no doubt an underestimate, because most of these patients are ashamed and do not admit to the problem unless properly and insistently questioned by their physician.

Patients with fecal incontinence should undergo a “functional” perineal examination and digital exploration, aimed at detecting perineal descent and assessing anal sphincter tone and contraction. The means to carry out anal manometry and transanal/vaginal rotating probe ultrasound (US) and/or transperineal dynamic US examinations should be available in the proctologist’s office. If fecal incontinence is determined, it is initially treated using conservative measures, the main one being pelvic floor rehabilitation.

In fact, very few patients with fecal incontinence need to be treated surgically, less than 15% according to the Annual Report of the SICCR Coloproctology Units (UCP Club), published yearly by Bruni and Occelli and even less, about 1%, according to Bartolo, as reported in a consensus paper by Baeten et al. in 2007. Surgical treatment has the disadvantage that some of the procedures used to treat fecal incontinence are likely to be followed by complications, such as suture dehiscence, local sepsis, and other adverse events, e.g., pacemaker dysfunction or prosthesis displacement. This is the case with dynamic graciloplasty and artificial bowel sphincter, two procedures, discussed below, whose use has recently declined.

Some innovations have proven to be effective, e.g., sacral neuromodulation and, to a minor extent, bulking agents, but sphincter reconstruction and plication may still be helpful in selected cases. Both classical and novel procedures may be followed by complications and the specialist has to be prepared to prevent and to manage them. Moreover, while new technologies are important, as in the treatment of obstructed defecation, when dealing with incontinent patients a holistic approach is needed (Chatoor et al., 2007).

In the following, instead of providing a commented list of postoperative complications, as done in the previous chapter, I use the “live surgery” method as the basis for a discussion of how to prevent them—an approach that the reader may find more appealing.

9.2 Complications During and After Post-anal and Total Pelvic Floor Repair: “Live Surgery”

Recently, a consensus conference chaired by Norman Williams (Baeten et al., 2007), confirmed that Parks’ post-anal repair technique continues to have a place in the surgical management of incontinent patients. Elderly patients without severe sphincter dystrophy and those unable to use sophisticated therapeutic devices are the most suitable cases. Mackey et al. (2010) reported an 80% success rate in the long-term in patients with neurogenic incontinence who were selected on the basis of preoperative anorectal physiology tests. This is likely to be a rather optimistic view, as, among our patients, not more than half show significant improvement, also following postoperative sphincter rehabilitation, and only a quarter are fully continent in the medium term. However,
regardless of the success rate, the Parks procedure is still used, which necessitates a review of its potential complications. So let us now proceed to the operating theatre.

First, a few words about the preoperative preparation. As noted in the Introduction, intraoperatively, rectal perforation occasionally occurs. It even happened to the surgeon who invented the procedure and used it to operate on more than 150 patients. In case of perforation, it is essential to avoid fecal spillage, with contamination of the retrorectal spaces; therefore, mechanical preparation of the patient, with the rectum emptied, should be carried out prior to surgery. In case of iatrogenic lesion, the defect should be sutured, or, if it is large and there has been significant fecal contamination, a diverting sigmoidostomy might be needed. Antibiotic prophylaxis should also be performed, aimed at minimizing the risk of local sepsis. We use metronidazole and last-generation cephalosporins.

Our patient is in the lithotomy position, but the jack-knife position may also be used. A spinal anesthesia may be preferred, possibly implemented with sedation using i.v. Diprivan, as most patients are elderly and fragile and the operation lasts less than one hour. General anesthesia carries the advantage that the surgeon may better appreciate sphincter tone, but I prefer the spinal approach, as it provides full analgesia for several hours after surgery, which is useful in patients with potentially painful muscle sutures. If general anesthesia is performed, it is better to inject Naropine, a long-lasting local anesthetic, at the end of the operation and to ask the anesthetist to insert an i.v. elastomer with either morphine or Ketorolac and gastric protective drugs, bearing in mind that a prolonged use of morphine may increase sigmoid segmental contractions and delay first evacuation.

After making a post-anal “V”-shaped incision, we are faced with the first potential complication: damage of either the sphincter or the anal canal. Specifically, although we have to identify the intersphincteric plane, the incision must correspond with the subcutaneous part of the external sphincter in order to keep the surgical wound at least 4 cm behind the anus, less prone to fecal contamination and local sepsis. Therefore, the correct plane has to be identified between the lower edges of the external sphincter, which has to be left posteriorly, and those of the internal sphincter, located anteriorly. To differentiate between the two muscles, we can seldom rely upon their color, unlike in patients undergoing surgery for anal fissure after the intersphincteric groove has been identified. The difference is that elderly neurogenically incontinent females have pale denervated striated sphincters. A simple trick is to touch the muscles with diathermy: the external sphincter usually reacts with a circumferential contraction. As soon as the intersphincteric plane is entered, it should be kept in mind that the internal sphincter is thin in these patients, especially in its upper part, corresponding to the upper anal canal. Therefore, attention must be paid to avoid injury of the anal canal; otherwise, the defect will have to be closed with a fine extraluminal absorbable running suture.

Continuing the dissection higher up, not more than 3–4 cm from the anal verge, as the anal canal is short in these incontinent, often female patients, we reach the posterior part of the puborectalis muscle, which is gently pulled downwards with a Mathieu retractor (Fig. 9.1). The upper part of the intersphincteric plane is then entered bilaterally, by blunt scissors dissection or using a small swab, until the entire puborectalis sling is separated from the inner visceral muscle up to the anorectal ring. At this point, the dissection can be ended if a “limited” post-anal repair is performed, in case the anal canal, which is an important factor for anal continence, does not need to be markedly lengthened, or if an anterior levatorplasty is planned.

Alternatively, if the dissection has to be continued upwards to carry out a formal Parks post-anal repair, the Waldeyer fascia, a whitish fibrotic tissue, is divided to identify the pubococcygeus and iliococcygeus muscles, which subsequently will be plicated. Yellow spots indicating the posterior distal mesorectum will appear and a careful dissection between the levator plane and the rectal smooth muscle is subsequently carried out in the posterior hemicircumference, avoiding inadvertent rectal injuries. This plane is embryologically avascular; therefore, if bleeding appears, it means that we entered at the wrong plane, cutting some of the striated muscle fibers. At the end of this maneuver, the lower rectum will be freed and lifted up with a Morris retractor. It is better not to use a Mathieu retractor at this stage, as its distal hooks might cause injury to the rectum.