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# Colovaginal anastomosis: A totally unacceptable surgical error

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ABSTRACT

*INTRODUCTION:* The low anterior rectal resection and double stapling technique are well-established surgical procedures with well-known pitfalls, potential complications, and preventive measures. Colovaginal anastomosis is a surgical error which should not occur.
*PRESENTATION OF CASE:* A 39-year old woman underwent low anterior resection with double stapling technique, for rectal carcinoma in the City Hospital. On the fifth postoperative day she noticed passage of gas and two days later passage of feces from vagina. The surgeons who performed the operation explained to her that it is a normal condition for such modern procedure that is supervised by international educator engaged by the Government. The patient lived with this condition, passage of gas and feces from the vagina and nothing from anus for three months when her oncologist referred her for a second opinion at the University Clinic for Digestive Surgery. The digital examinations revealed a blind rectal stump, and feces in vagina; thus having the patient's history in mind, we assumed that the patient had a colovaginal anastomosis. Our assumption was confirmed by two succeeding radiological examinations. Initially, water soluble contrast enema was performed to assess the colon, when a clear-cut blind rectal stump was detected. Afterwards, the vaginography revealed a copious flow of contrast material from the vagina toward the sigmoid colon. After a few days, a restorative surgery was done.
*DISCUSSION:* Most of the early postoperative complications are a result of surgical errors.
*CONCLUSION:* We believe that there is no excuse for such a surgical error and postoperative follow-up.


## 1. Introduction

The concept of double-stapled anastomosis was introduced by Nance in 1979 [1] and the technique popularized by Knight and Griffen (double stapling technique – DST) [2]. DST has had a significant impact on colorectal surgery, extending the level of circular stapled anastomosis into the level of lower third of the rectum. Coloanal or low colorectal anastomosis using the DST has become a common in the low and ultra-low anterior resection for rectal cancer [4,5]. The major effect of this technique has been to stimulate the stapling manufacturers to modify both linear stapler (LS) and circular stapler (CS) design to make the DST operation safer and more efficient. Due to those modifications, surgeons can apply DST in most of the cases in open and laparoscopic rectal resections [5,6]. Today, the low anterior rectal resection and double stapling technique are well-established surgical procedures with well-known pitfalls, potential complications, and preventive measures. The basic principles of these procedures are explained even in the textbook of general surgery [7]. Despite that, both early and late postoperative complications can still occur. Most of the early postoperative complications are a result of surgical errors [8]. One such error is colovaginal anastomosis and until today two cases during the primary procedures [9,10] and three cases in the restorative procedure after Hartmann operation [11,12,13] have been reported.

We are presenting a case of colovaginal anastomosis during the primary intervention, low anterior resection with DST for rectal carcinoma. On the basis of our experience and data from the literature, we will give a critical review and try to explain why such errors still happen.

## 2. Presentation of case

A 39-year old woman underwent a low anterior resection with a double stapling technique, for rectal carcinoma. The diagnosis and treatment were done in the General City Hospital September the 8th in Skopje. The official dismissal document stated that the patient had an uneventful recovery though the history of this patient indicated the opposite. On the 5th postoperative day, she

*Abbreviations:* DST, double stapling technique; CS, circular staplers; RVF, recto vaginal fistula.

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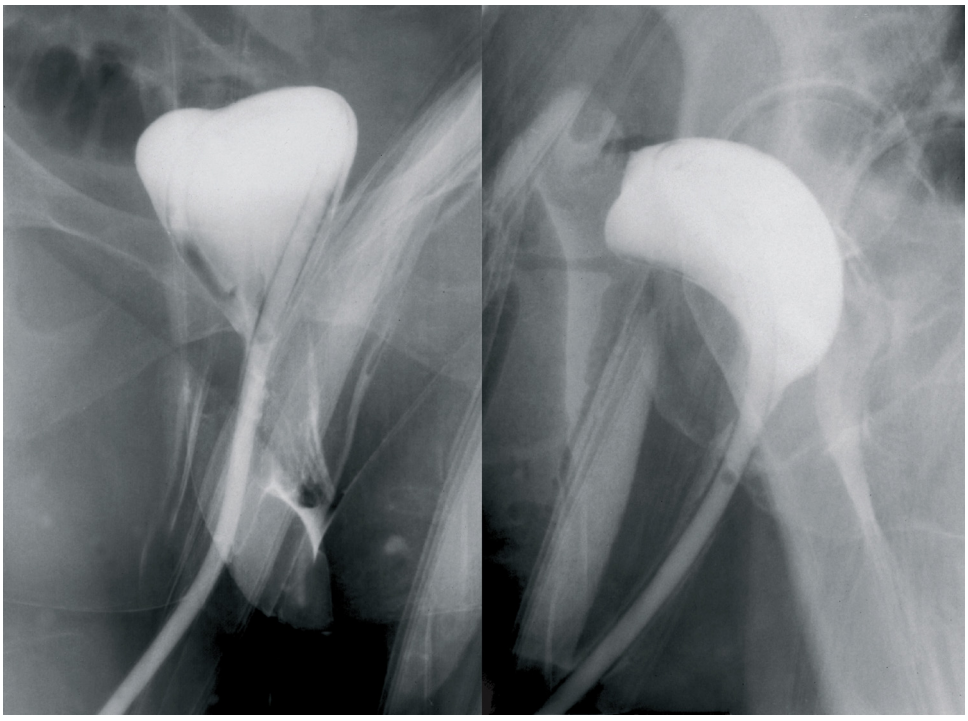

**Fig. 1.** Film from water-soluble contrast enema showing rectal stump.

noticed passage of gas and two days later passage of feces from the vagina and complained to the surgeons. The surgeons that had performed the operation explained to her that it is a normal condition for such a modern procedure conducted under the supervision of an educator from the USA. The patient lived with this condition, passage of gas and feces from the vagina and nothing from the anus, for three months. On the regular check-up in the Surgical Outpatient Department in the same hospital, the surgeons persuaded her that it was a normal condition, so eventually she accepted this unacceptable condition. The patient was sent to the University Clinic for Radiotherapy and Oncology for adjuvant therapy for Stage III B rectal carcinoma. Since the patient was prepared for radiotherapy, a computerized tomography (CT) scan on the abdomen and pelvis was done. Except for an enlarged Fallopian tube and ovary on the left side, the radiologist did not provide any additional comments. Due to the discrepancy between the official document and history of the patient, the oncologist sent the patient for a magnetic resonance imaging (MRI). For the first time the radiologist suspected a recto–vaginal fistula but without a distinct communication between the vagina and rectum! Consequently, the oncologist sent the patient to the University Clinic for Digestive Surgery for a second surgical opinion. On the digital examinations we found a blind rectal stump, and we also found feces in the vagina. Considering the data of the patient's history, we assumed that she had a colovaginal anastomosis. Our assumption was confirmed by two succeeding radiological examinations. Initially, water soluble contrast enema was performed to assess the colon, when a clear-cut blind rectal stump was detected (Fig. 1). Afterwards, the vaginography revealed copious flow of contrast material from the vagina toward the sigmoid colon (Fig. 2). With this diagnosis, the patient was granted permission by the healthcare insurance fund for further treatment in our department. Prior to laparotomy, we performed endoscopy under a general anesthesia which confirmed the presence of a colovaginal anastomosis on the posterior wall of the vagina just below the cervix uteri (Fig. 3). Afterwards, we proceeded with restorative surgery. We found adhesions in the low abdomen and pelvis but we succeeded to do proper adhesiollysis, dissection,

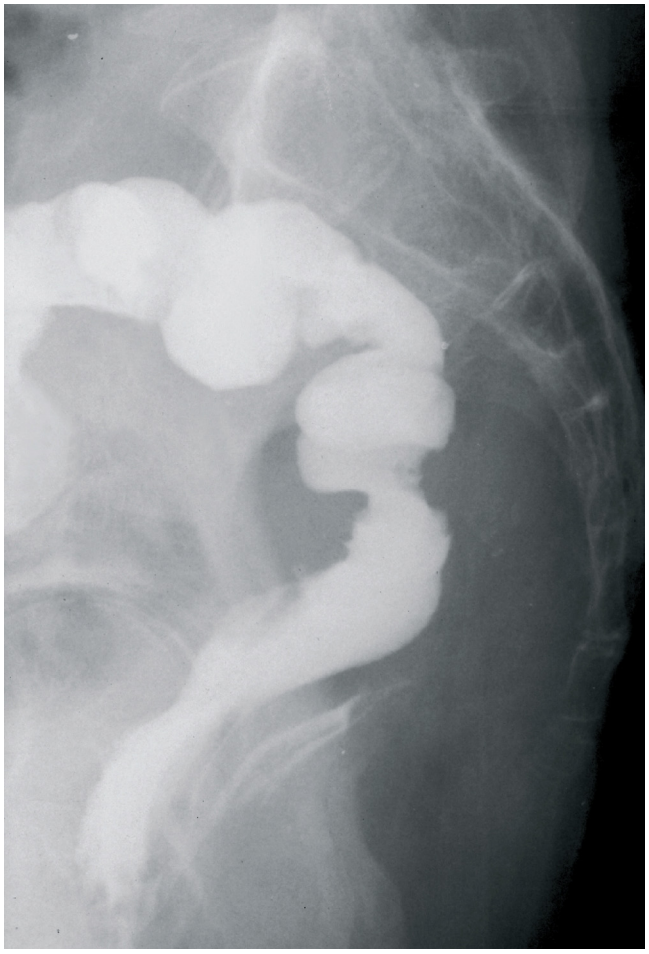

**Fig. 2.** Vaginogram revealing communication of the vagina with the sigmoid colon.