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It was not a ureteral lesion. The importance of a correct comparison of clinical history and diagnostic imaging

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ABSTRACT

This case report could be considered very useful to show to the surgical residents how to obtain a correct diagnosis utilizing logically both clinical signs and diagnostic tools. Twenty days after a right hemicolectomy for colon cancer this patient presented a right sided colic pain in the lumbar region with irradiation to the groin and a CT showing a dilated right ureter. The anamnesis of the recent surgery was suggestive for iatrogenic ureteral lesion. Through the comparison of pre-operative and postoperative CT, however, it has been realized that a stone present in the right pelvis before surgery had been gone down to the ureter just immediately after surgery. Iatrogenic ureteral lesions after colorectal surgery are rare but should be considered a potential event during colorectal surgery. However, the correct and complete evaluation of anamnesis, clinical history, and diagnostic tools should be always done in order to reach a correct diagnosis. During the surgical residency, the residents should be encouraged to reason and think carefully, without any haste, to obtain a valid diagnostic solution.

Keywords: hemicolectomy; cancer; ureter

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The incidence of iatrogenic ureteral injuries is about 0.24% to 1.95% [1]. These lesions are associated with significant morbidity and mortality and are a possible complication during colorectal surgery and especially the left ureter could be damaged during procedures like sigmoidectomy, low anterior and abdominoperineal resection. Patient factors, as prior pelvic surgery, radiotherapy, metastatic cancer, and anatomic abnormalities can increase the risk of injury. Rectal cancer is the most frequent situation for iatrogenic ureteral injury because of the proximity of the ureters to the dissection plane. Recently a curious situation, that had could become extremely dangerous, happened in a 66-year-old woman admitted to our department in October 2020 because of abdominal pain and anaemia. A colonoscopy revealed the presence of a tumor located in the ascending colon and the pathological response was a moderately differentiated adenocarcinoma. Abdominal computed tomography (CT) showed irregular thickening of the ascending colon walls and multiple lymph nodes were observed around the tumor. The patient underwent a right open hemicolectomy and was discharged on 5th postoperative day without any complication. The anatomopathological classification was T2 N0 M0. Twenty days after the discharge the patient presented herself again to our attention with right-sided colic pain in the lumbar region radiating to the groin. Ultrasound revealed dilated right ureter and, due to the very recent right hemicolectomy, a probable lesion of the right ureter was suspected. This clinical picture would have been particularly serious because the left kidney had an almost totally compromised function due a too lately treated pyeloureteral stenosis. The following day a CT revealed an hydronephrosis secondary to ureteral obstructive stone at the level of the distal ureter about 4 cm from the bladder (Figures 1 and 2a). The CT picture in this patient who recently had undergone a right hemicolectomy, could recall the picture of a ureteral lesion. At

this point the preoperative CT has been reexamined and a stone of 8 mm-diameter was visualized in the renal pelvis (Figure 2b) that was not present in this postoperative CT. The patient has been successfully treated by the urologists and the ureteral stone was removed. We think that this case has been a paradigmatic case and could be very useful to show to the surgical residents that to obtain a correct evaluation of the patient we should consider both clinical data and diagnostic tests. A case like this that we are reporting could be presented during the meetings dedicated to surgical residents to train them to be able to reason, to show them that they must learn how to obtain the diagnosis gathering every possible sign. In our case at first sight the patient's symptoms were very suspect for a ureteral lesion because they appeared just Immediately after a right hemicolectomy and it is absolutely strange from the statistical point of view that a stone, present in the renal pelvis before surgery, had been gone down to the ureter just few days after the right hemicolectomy. The correct comparison of pre-operative and post-operative diagnostic imaging allowed the recognition of the stone in the ureter and the absence of it in the renal pelvis (Figure 2a). The CT picture was correct in identifying a ureteral stone, but its appearance immediately after the right hemicolectomy was strange and/or unusual. It has been an unexpected event in the postoperative course of the patient, so that it was logic to consider a possible iatrogenic ureteral lesion. Iatrogenic injuries of the ureter are unfortunately a possible complication in colorectal surgery, and we agree that it should be necessary a careful knowledge of surgical anatomy and a meticulous surgical technique to avoid them. In our case a logic clinical judgement had firstly suspected the ureteral lesion, but a correct diagnostic verified the presence of the ureteral stone and driven us to a definitive valid treatment.

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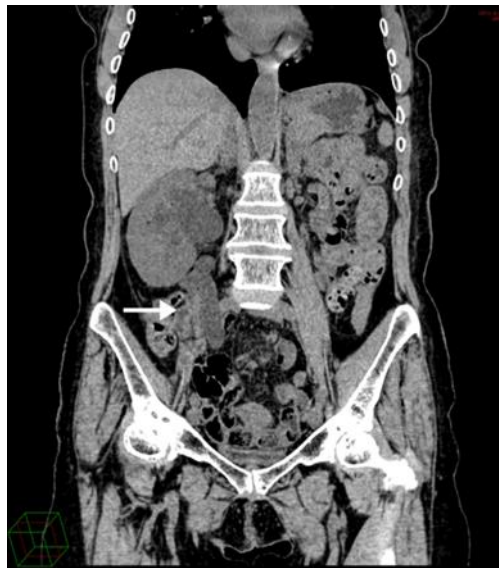
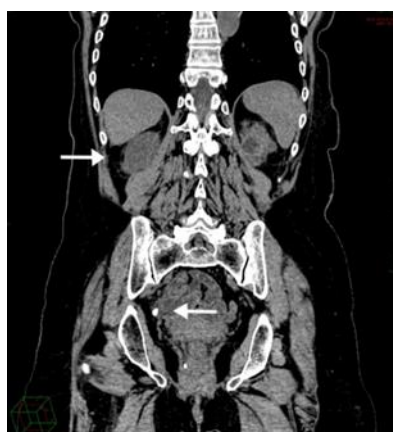


Figure 1.



(a)



(b)

Figure 2. (a) Ureteral stone about 4 cm from the bladder; (b) Stone in the pelvis.