

## Biopsy and Surgery

*Haitham Akram Saimeh*

Colorectal Surgery, King Faisal Specialist Hospital and Research Center

### ABSTRACT

*We are experiencing great advances in the medical field that help in early diagnosis of rectal cancer that tend to reduce the patient's morbidity and mortality, instead early prognosis, screening protocols greatly improved the overall patient's well-being. However it should always be taken into account that pathological biopsies have varying rates of specificity and sensitivity, therefore we should not only rely on pathological findings solely but patients clinical presentation still remains a gold standard for treatment setup. We can see from this case that we will not only depend on the preoperative biopsy pathological results, many cases with repeated multiple biopsies with benign lesions, however post resection pathology showed adenocarcinoma. Therefore, we should also depend on the clinical symptoms as well as on the scope finding indicating the "L" defined shape obstructing the lumen. In this case study, I will be presenting a case that was admitted and diagnosed in King Faisal Specialist Hospital and Research center that clearly revealed that biopsy does not always rule out malignancy.*

**Keywords:** *Biopsy and Surgery, Colorectal Cancer, Rectal Cancer recurrence, Cancer and Surgery, Pathological findings and clinical presentation.*

### INTRODUCTION

Screening is considered as a gold standard procedure since it saves the lives of numerous individuals because some patients whose cancer is detected and treated at an early stage would tend to prolong the survival age compared to those that are underdiagnosed and miss the treatment.

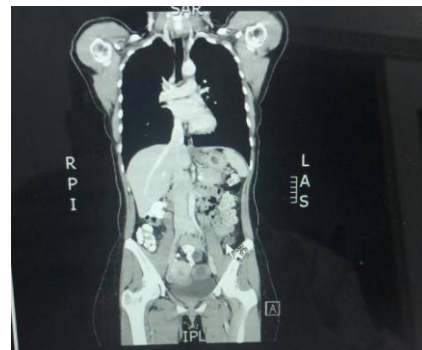
Based on previous studies conducted the predictive value of biopsy to detect malignancy include: Sensitivity: 96% whereas for specificity was 100%.<sup>1</sup>

Regarding that the technical advances as imaging, colonoscopy, magnetic resonance imaging, pathological biopsies tend to have a great impact on colorectal surgery by reducing the level of mortality and morbidity, but we should always take into consideration that biopsies do not always rule out malignancy therefore as a physician we should always rely on the clinical presentation of the patient together with the biopsies done. We should always do continuous follow up programs to keep monitoring the patient's wellbeing and cancer progress. It's highly recommended to work with a multidisprinary team including the pathologist, radiologist, and surgeons to discuss the patient's case from different clinical point of views and end up making the right decision regarding the approach followed.

### Case

We reported a case of a 34 years old Malaysian lady who was investigated outside facility and diagnosed as Low Rectal Cancer. In our hospital, KFSH&RC, we did for her the full staging methods since staging assist the physician to determine the spread extent of the disease together with setting the appropriate treatment approach , but we should also take into consideration the patients comorbidities into account when setting the approach because this greatly affects the prognosis.

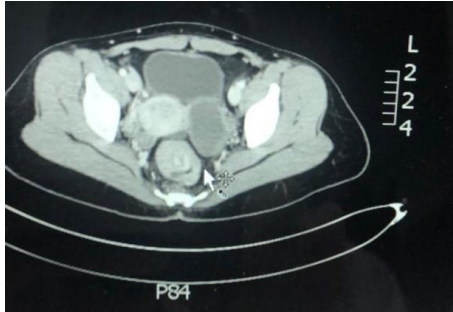
Clinical examination showed a 7cm rectal mass, abdominal palpation was soft, lax, and showed no masses. CT CAP showed no distal metastasis. MRI pelvis revealed a 7cm mass with T2 N0. (Fig 1).



**Fig 1:** MRI showing 7 cm from the anal verge

Sigmoidoscopy was repeated with tattooing also biopsy taken from the rectal mass; pathology result revealed Tubulovillous adenoma together high-grade dysplasia.

The patient was seen by Oncogynecologist because the CT scan showed a left ovarium mass with enlarged uterus. (Fig 2).



**Fig 2:** Abdominal CT scan indicating the presence of rectal mass

The decision was done to take the patient for OR, combination with the Oncogynecologist.

The patient underwent left Oophorectomy and partial right Oophorectomy, with pathology as endometriosis. The patient had low anterior resection with anastomosis without diversion. The rectosigmoid pathology specimen showed adenocarcinoma T2 N0. She had smooth post-operative course.

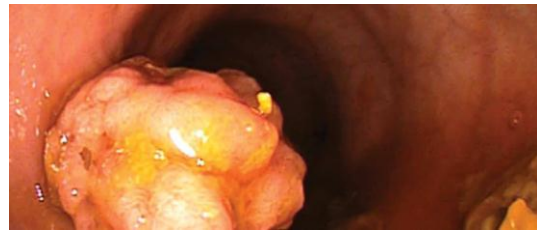
## DISCUSSION

Multiple case reports placed great role of preoperative biopsies in surgical decision making, however regardless the great advances in imaging techniques and biopsy procedures still they could give false results so a surgeon should not completely rely on these specimens only.

In this case, findings were negative for malignancy, but postoperative pathological results were positive for malignancy, this may be due that the specimen material might not be representative, therefore we should always consider doing re-biopsy and deeper levels should be taken if the physical examinations are contraindicating the pathological findings.

In order to correctly define exactly the distal and proximal parts of the tumor tattooing procedure is done mainly in multiple soft colomic masses since this procedure gives the surgeon a well-defined map road intraoperatively, so the

surgeon would be able to undergo complete resection of the tumor to achieve free edges postoperatively and this contributes greatly to the prognosis of the patient postoperatively. Regarding this case we did tattooing scope for the ovaries, 2-3 cm below and above the mass in a free edge area. Tattooing is very important in scope, specifically low rectal soft masses, since sometimes it is difficult to do complete resection if you are unable to define the mass intraoperatively. (Fig 3).



**Fig 3:** This figure showed tattooing during scope

## CONCLUSION

In this case although the pathology results revealed benign result, we decided to admit her for surgery, and the final pathology showed adenocarcinoma. We have a lot of cases that the pre-op the pathology is benign, and the final pathology after surgery showed cancer. Therefore, we must always depend on other risk factors as MRS and CT CAP results, also we must take in consideration the importance of scoping before the surgery for biopsy confirmation and the tattooing.

Sometimes we should repeat biopsies that showed benign lesion, because when the patient is delayed from a lifesaving surgery, this would greatly affect the stage, so if you are in doubt, take it out. we must also concentrate on tattooing before surgery, especially on low rectal masses.

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## Conservative treatment with anastomotic leakage

*Haitham Akram Saimeh*

Colorectal Surgery, King Faisal Specialist Hospital and Research center

### ABSTRACT

*Despite the great advances encountered in the medical field, yet anastomotic leaks remain the major cause of morbidity and mortality post colorectal surgeries. Anastomotic leaks still remain as major threat that surgeons tend to encounter frequently, it is associated with several risk factors as patients' history, underlying comorbidities, as well as the surgical procedure done. There is no fixed criteria on anastomotic leak management yet early diagnosis and interventions are considered to be the main treatment plan strategy followed. A case that was presented and treated as with postoperative anastomotic leakage dealt with conservative intervention including postoperative drainage, antibiotics administration in order to prevent any further peritoneal spread.*

**Keywords:** *Postoperative anastomotic leakage, Conservative approach, Postoperative complication management, surgical complications.*

### INTRODUCTION

Colorectal anastomotic leak is still the most feared gastrointestinal complication, although great interventions taken in the preoperative and postoperative field. . Although anastomotic leaks are a major complication yet there is no set agreement and consensus on a specific treatment and management protocol.<sup>1</sup> Anastomotic leak complication is linked to hospital burden, as well as increasing the number of days a patient will be hospitalized postoperatively, thereby increasing the risk of encountering other source of infection. Colorectal anastomotic leaks are defined as a defect in the intestinal wall at the anastomotic site leading to a communication between intra and extraluminal compartments, for a clinical decision making process, anastomotic leaks should be graded in order to manage the severity of the complication.<sup>2</sup> Surgeons should set a clear diagnostic criterion involving both radiologic as well as clinical features in order to have a clear treatment plan.

Based on a previous research conducted results showed that the incidence of anastomotic leak among 190 patients was 7.9% which corresponds to 15 patients.<sup>3</sup> Variations among patients occur depending on their national status, physical activity, body weight, and age. Currently, the clinical picture of the patient postoperatively guides the surgeon on what approach to follow so if the patient is showing unstable vital signs, immediate operative procedures should be done, but if the patient is

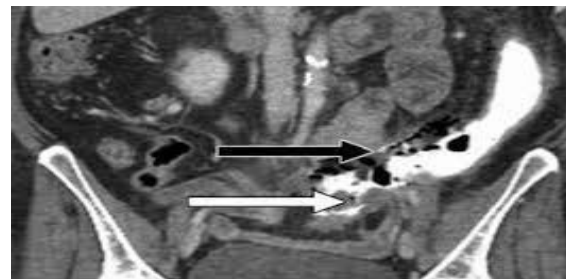
vitaly stable then conservative interventions is done.

### Case

At the Colorectal Surgery Department of a tertiary hospital we reported a unique case of a 69 years old, gentleman, was fully investigated and diagnosed in a tertiary hospital as left colon cancer, splenic flexure in 2018.

The patient underwent lap left hemicolectomy converted to open due to adhesions. In the post-operative course, the patient had the symptoms and signs of anastomotic leak tachycardia, with abdominal tenderness.

CT Abdomen and pelvis showed contrast outside the colon, and collection around the anastomosis, as shown in the figure below.

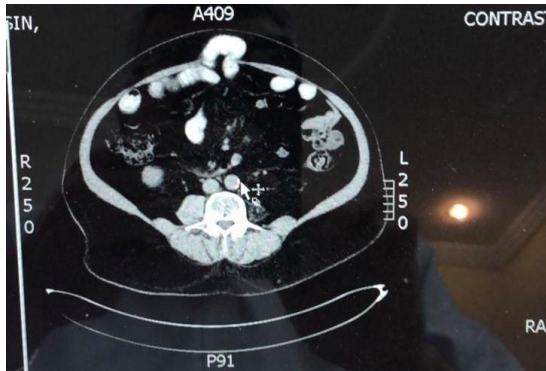


**Fig 1:** Figure indicating a leak , together with air bubbles around the anastomotic area.

The patient was treated conservatively, NPO, TPN, and covered with IV antibiotics for almost 10 days, as the patient was not septic with stable vital signs.

The patient improved on conservative management, and he did not need further surgery for the anastomotic leak. He was discharged in a good general condition.

On regular clinic follow-up, the clinical examination is normal. Repeated CT scan abdomen was normal without collection and no signs of intra-abdominal leak, scope was done for the patient, and it was normal, intact anastomotic area, as indicated in the figure below.



**Fig 2:** This figure was taken after the leak was treated conservatively, no airbubbles, nor collection was found.

## DISCUSSION

Based on studies conducted, anastomotic leaks incidence ranges from 1.8% to 10.4%<sup>4</sup>. Therefore, it greatly impacts the patient's wellbeing postoperatively. Several case reports exist in the literature of anastomotic leak; however, it varies from one case to another what approach should be followed in order to treat the leakage. Methods of treating postoperative anastomotic leaks vary based on the patients' history and presenting clinical symptoms, but always strict follow up postoperatively is highly recommended to avoid any source of further contamination that may further lead to encountering a septic shock that greatly deteriorates the patients' well-being.

In my case, the patient was operated with laparoscopic left hemicolectomy, because of multiple intraperitoneal adhesions, anastomosis was done by GIA without torsion, with adequate good blood supply. The patient profile showed that he was not anemic, Hemoglobin level =12mg/dl with normal albumin level of 40 mg/dl, and no any previous cardiac problems.

Day two postoperatively, the patient presented with tachycardiac {heart rate 110-115 beats per minute}, abdominal pain and nausea.

CT scan was done, and it revealed anastomotic leak plus collection. **Figure 1** Patient blood profile showed that the patient was aseptically, stable vital signs, afebrile, WBC count of 12.

When abdominal examination was conducted, the abdomen showed tenderness in the left side of the abdomen, no rigidity. Therefore, after diagnosing the patient both clinically and with advanced CT scan the decision was to choose the conservative treatment approach, keep N.P.O, T.P.N and strict fill. Following conservative approach the patient is given broad spectrum antibiotics.

After fifteen days postoperatively, CT scan was repeated (**Figure 2**) and showed minimal collection, together with abdominal drain was almost null, therefore the T.P.N was stopped gradually, tachycardia improved {heart rate 90 beats per minute}, afebrile, and the patient no longer complained of abdominal pain, physical abdominal examination revealed no abdominal tenderness. Drainage was removed, and the patient was discharged in a general good condition, without any surgical intervention.

The patient had O.P.D follow up, scope was done one year postoperatively, showed normal anastomosis without any masses.

## CONCLUSION

Not every anastomotic leak need surgery. We must depend on the clinical examination of the patient. If the patient is not septic, with stable vital signs, we can offer him all the best of conservative treatment, which will help in avoiding another surgery. We do not depend only on radiological findings; clinical examination of the patient is the most important and valid point in deciding to go for surgery or not.

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