

**Case Report**

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## Diffuse abscess in the abdominal wall after appendectomy: Case reports

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### Abstract

Diffuse abscess in the abdominal wall complicating appendectomy is less reported. Authors report a 45 year-old man, who presented a warm, fluctuation and painful swelling of the all under umbilical abdominal wall four days after appendectomy for appendicitis with gangrenous appendix. The root of the right thigh and the scrotum were infiltrated with areas of cutaneous necrosis. Its treatment consisted on evacuation of the pus, excision of the necrotic tissues, daily dressings combined to antibiotic treatment according to antibiogram. The surgical suites were good with disappearance of fever and wounds cleansing, which allowed secondary suture after 14 days of wounds dressings. Although, that good evolution, it increased hospital journey and financial cost of appendectomy.

**Keywords:** Abdominal wall, Abscess, Appendectomy.

### INTRODUCTION

The appendectomy is the most common procedure in abdominal surgical emergencies<sup>[1]</sup>. But, morbidity and even mortality of appendectomies are not negligible and do not reflect the trivial nature given to this intervention, often performed by novices in surgery<sup>[2]</sup>. The early complications of appendectomy are dominated by local and limited suppurations<sup>[1]</sup>. The diffuse abscess in the abdominal wall complicating appendectomy is less reported, we report here one case of *Escherichia coli*.

### CASE REPORT

A 45-year-old man admitted in our hospital for fever and diffuse abdominal pain occurred four days after an appendectomy for appendicitis with gangrenous appendix performed in another hospital.

Physical examination revealed body temperature at 38°C, polypnea 32 cycles/minutes, and a closed surgical wound. The surgical wound seemed not infected. We noticed a warm, fluctuation and painful swelling of the all under umbilical abdominal wall. The root of the right thigh and the scrotum were infiltrated with areas of cutaneous necrosis.

The biological examinations revealed White blood cells at 24.1 Giga/l, predominantly neutrophilic (88%). The abdominal ultrasound showed a subcutaneous liquid collection diffused in anterior abdominal wall.

Surgical operation by incisions of discharge in the flanks and the left iliac fossa allowed evacuating of about 1000 cc of pus. The Exploration has demonstrated extensive necrosis of the subcutaneous tissue. Necrosectomy associated with abundant saline wash followed by wicking with sodium hypochlorite (Dakin) was performed (figure 1). There was no abnormality in the exploration of the peritoneal cavity by a medial umbilical route.

*Escherichia coli* sensible to ceftriaxone and metronidazole was isolated after the bacteriological examination of the pus. The patient received these double antibiotics and daily dressings of wounds. The surgical suites were good with disappearance of fever and wounds cleansing, which allowed secondary suture after 14 days of wounds dressings (figure 2). The patient was discharged after 39 days of hospitalization.

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Figure 1: Wounds during dressings



Figure 2: Wounds ready for secondary sutures

## DISCUSSION

The appendectomy can be complicated regardless of the anatomopathological forms of the appendix in acute appendicitis, even in the absence of significant surgical difficulties [1]. However, postoperative complications are even more common if appendicitis is complicated [3]. These complications are dominated by parietal infections [1,3], the occurrence of which depends either on an appendectomy performed under poor aseptic conditions by an untrained operator [2], which could be the case of our patient; Or endogenous factors related to the patient and his pathological history such as: diabetes, corticosteroids, neoplasia, severe malnutrition, HIV infection with a prevalence up to 50% [4]. Our patient had no pathological history.

Most authors do not necessarily specify the extent of abdominal wall suppuration or the amount of evacuated pus [4,5]. In our case, suppuration was extended to the iliac fossae, the flanks to the hypogastric region and the scrotum with areas of necrosis; which led us to perform a necrosectomy, discharge incisions with evacuation of about 1000cc of pus the first day.

Several authors [6-8] have shown that laparoscopic appendectomy is less complicated with wall infections than laparotomy. Despite the technical and economic constraints associated with laparoscopic surgery, this approach is rapidly developing in Africa [6]. In addition to its other known advantages, such as reduction in postoperative pain, aesthetic damage, duration of hospitalization, faster recovery of activity [7], it is possible to further reduce the post-operative complications such as parietal infection after appendectomies in our workplace.

In superficial abscesses and pyomyositis, staphylococcus aureus is the most frequently affected germ. Streptococci, gram negative bacilli and mycobacteria can also be found [9]. In our patient, a Gram-negative bacillus, *Escherichia coli* was identified and antibiotic-oriented therapy enabled an appropriate treatment of this patient. The isolation of *Escherichia coli* could be explained by the fact that the parietal

contamination originated from the appendix which was gangrenous and could harbor this germ which is usually a saprophyte of the digestive tract.

The patient was dressed with sodium hypochlorite (Dakin), which allowed a perfect cleansing of wounds after 14 days. The antiseptic activity is related to the oxidative power of chlorine which destroys membrane and chromosomal proteins of the germs [10].

The mean duration of hospital stay is 7-8 days for an uncomplicated appendectomy and 21 days for parietal suppuration postappendicectomy [2]; Which represents a significant lengthening hospital stay in case of parietal infection. This situation leads to increase the financial cost of the treatment of appendectomy, a shortfall for the patient and his entourage, especially in Africa where a large part of population does not have health care [1]. This was the case of our patient who had to remain in the hospital for 39 days.

## CONCLUSION

A diffuse abscess in the abdominal wall complicating appendectomy is less reported. It increases the hospital journey and the financial cost of appendectomy. An adequate treatment results in healing. The routine practice of laparoscopic appendectomy in Africa would further reduce this complication.

## Conflicts of Interest:

The authors do not state any conflict of interest.

## Authors' Contribution:

All the authors have taken part in the caring of patients and in the writing of the manuscript. All the authors approve the final version of the manuscript.

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