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Case Series

Management of Postoperative Peritonitis: Experience of the Department of Visceral Surgery at Avicenne Military Hospital in Marrakech (Report of 30 Cases)

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Abstract

Postoperative peritonitis (POP) is a serious complication of abdominal surgery, associated with high morbidity and mortality despite advances in diagnosis and treatment. The objective of this study was to describe the diagnostic, therapeutic, and outcome aspects of POP in the visceral surgery department of Avicenne Military Hospital in Marrakech. A retrospective study was conducted on 30 cases collected between January 2020 and December 2024. All patients included had undergone reoperation for confirmed peritonitis following abdominal surgery. The mean age was 47.9 years, with a balanced sex ratio. Major comorbidities included diabetes, obesity, and neoplastic diseases. The predominant causes were anastomotic leakage (43.3%) and visceral perforation (30%). Diagnosis was based on abdominal pain, fever, leukocytosis, and computed tomography (CT). Treatment involved early surgical reintervention, peritoneal lavage, and appropriate antibiotic therapy. Observed mortality remained significant, influenced by the timing of diagnosis, multiorgan failure, and patient condition. POP remains a major medico-surgical emergency requiring a multidisciplinary approach, early detection, and optimized treatment to improve survival.

Keywords: Postoperative peritonitis, abdominal surgery, antibiotic therapy, intensive care, prognosis.

INTRODUCTION

Postoperative peritonitis (POP) is a rare but serious complication, occurring in 2–3% of laparotomies. Mortality, estimated at 30–35%, remains high despite advances in surgery and intensive care. POP is defined as infectious peritoneal inflammation occurring within 90 days of abdominal surgery, often due to anastomotic leakage or visceral perforation.

Diagnosis is often challenging due to the postoperative context and sometimes subtle symptoms. Treatment relies on prompt surgical reintervention, control of the infectious source, and appropriate antibiotic therapy.

This study aims to report the experience of the visceral surgery department at Avicenne Military Hospital in Marrakech through 30 cases, identifying diagnostic difficulties, therapeutic approaches, and main prognostic factors.

PATIENTS AND METHODS

This retrospective study included 30 patients managed for POP between January 2020 and December 2024.

Inclusion criteria were patients over 18 years of age who underwent reoperation for peritonitis following urgent or elective abdominal surgery. Cases managed medically without reintervention were excluded.

Data collected included epidemiological characteristics (age, sex, medical history), conditions of initial surgery, time to onset of POP, clinical and biological signs, microbiological results, therapeutic modalities (surgical and medical), and postoperative outcomes.

Statistical analyses were performed using Word and Excel software, with a descriptive approach.

RESULTS

Epidemiological Profile

The mean age was 47.9 years, with predominance in the 40–60 age group. Sex distribution was balanced (15 men, 15 women). Main comorbidities were diabetes (16.7%), obesity (10%), chronic renal failure (6.7%), and neoplastic diseases (26.7%).

Initial Surgery

In 73% of cases, the initial surgery was elective; 27% were emergency procedures. The main operations involved the digestive tract (biliary, gastric, colorectal, small intestine), and less frequently, urological and gynecological organs.

Etiologies of POP

The most frequent causes were anastomotic leak or suture failure (43.3%), followed by visceral perforations (30%). In 26.7% of cases, no specific cause was identified.

Diagnosis

Predominant signs included abdominal pain (66.7%) and fever (43.3%). Laboratory tests showed leukocytosis and elevated C-reactive protein (CRP). Abdominopelvic CT, performed in all patients, confirmed the diagnosis in most cases.

Therapeutic Management

All patients underwent surgical reintervention via laparotomy. Peritoneal lavage and drainage were systematic.

Procedures varied according to etiology: suture, resection-anastomosis, diverting stoma, or biliary drainage. Probabilistic antibiotic therapy, then adapted according to microbiological results, was administered to all patients. Most frequently isolated organisms were *Escherichia coli*, *Klebsiella pneumoniae*, and *Enterococcus faecalis*.

Intensive care management was required for patients presenting with septic shock or multiorgan failure.

Outcomes

Outcomes were marked by significant morbidity and mortality approaching one-third of cases, mainly due to infection severity, fragile patient condition, and delayed diagnosis.

DISCUSSION

POP remains a major complication of abdominal surgery with high mortality. Its pathophysiology involves the spread of an infectious inoculum in a peritoneum weakened by surgery and postoperative immunosuppression.

Diagnosis is often difficult because clinical signs may be masked by postoperative pain or analgesics. Abdominopelvic CT remains the reference examination for locating collections and guiding surgical reintervention.

Therapeutically, early reoperation is the cornerstone, combined with rigorous source control, thorough lavage, and effective drainage. Antibiotic therapy should initially be broad-spectrum and then tailored according to antibiogram, considering the rising frequency of multidrug-resistant bacteria.

Main poor prognostic factors reported in the literature and confirmed in this study include delayed diagnosis, multiorgan failure, severe comorbidities, and neoplastic etiology.

Close collaboration between surgeons, intensivists, and microbiologists is essential to improve management and reduce mortality.

CONCLUSION

POP represents a serious medico-surgical emergency. Prevention relies on surgical rigor and close postoperative monitoring. Prognosis largely depends on early diagnosis and the quality of surgical and intensive care management.

Improving outcomes requires heightened clinician vigilance, better recognition of early signs, and rapid adaptation of the therapeutic strategy to the patient's condition and the causative pathogens.

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