

## COMPLICATIONS OF NON-THERAPEUTIC LAPAROTOMY FOR PENETRATING ABDOMINAL WOUNDS

**Introduction.** One of the arguments in favor of exploratory laparotomy in abdominal trauma is harmless of the procedure in the absence of significant abdominal injuries and uneventful postoperative recovery. **Purpose.** Postoperative complications analysis of nontherapeutic laparotomies for penetrating abdominal wounds. **Materials and methods.** A retrospective study of patients hospitalized in our center who underwent non-therapeutic laparotomy for penetrating abdominal trauma. Complication was considered any deviation from uneventful postoperative evolution upon clearly defined criteria. **Results.** Overall 198 laparotomies were performed during 64 months, 67 (33.8%) non-therapeutic intervention were identified. The annual rate of therapeutic laparotomies ranged from 47.5 to 94.4%. Following postoperative complications were recorded: postoperative atelectasis – 3(4.5%), pneumonia – 3(4.5%), respiratory failure – 1(1.5%), intraoperative hypotension – 1(1.5%) intraabdominal abscess – 3(4.5%), wound sepsis – 2 (3%), intraoperative incidents – 1(1.5%), postoperative ileus – 5(7.5%), adhesive bowel obstruction – 2(3%), psychosis 7(10.4%), unexplained fever – 20(29.9%) and 9(13.4%) patients had multiple complications. Two cases of bowel obstruction required repeated surgery, viscerolysis (n=1) and terminal ileostomy (n=1). The mean hospital stay for patients undergoing uncomplicated non-therapeutic laparotomy was  $6.2 \pm 0.3$ ; for those with complications it was  $9.65 \pm 0.9$  days ( $p < 0.001$ ). **Conclusions.** Non-therapeutic laparotomy for penetrating abdominal trauma entails an important morbidity rate. Although most are minor, intervention is not without risk of severe, potentially fatal postoperative complications. Complications, even minor results in a significant increase in the hospital stay as well as additional patient's risk. **Key words:** penetrating abdominal trauma, nontherapeutic laparotomy, complication

N232

## ABORDAREA DIFERENȚIATĂ A TRAUMATIZAȚILOR CU PLĂGI ABDOMINALE – EXPERIENȚA CNȘPMU

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**Introducere.** Din lipsa unui algoritm unanim acceptat abordarea traumatizațiilor cu plăgi abdominale variază de la laparotomie mandatorie la conduită nonoperatorie în cazuri selectate. Tactica se elaborează în funcție de preferințele personale ale chirurgului și tradițiile clinicii. **Scopul.** Analiza comparativă a rezultatelor diferitor căi de abordare diagnostico-curativă a traumatizațiilor cu plăgi abdominale. **Material și metode.** Studiu demarat în 2006-2010, include 469 pacienți consecutivi cu traumatism abdominal deschis spitalizați în CNȘPMU. Sumar în lot au fost pacienți cu: plăgi penetrante – 245; nepenetrante – 210; neconcludente – 14. Pe parcursul perioadei de referință tactica de abordare a evoluat de la laparotomie exploratorie (2006-2007) spre laparoscopie diagnostică (2008-2009) și în final – prin abordare nonoperatorie (2010). **Rezultate.** Incidența laparoscopiilor pozitive a sporit de la 39.5% la 82.4%. Rata laparotomiilor terapeutice a constituit 47.5-54.5% pentru laparotomia „de rutină”, 56.7-65,8% – pentru laparoscopia diagnostică și de 94.4% – pentru examenul clinic. Durata spitalizării a diminuat de la  $9,68 \pm 0,75$  pentru abordarea laparotomică la  $5,03 \pm 0,62$  zile pentru cea nonoperatorie ( $p < 0,001$ ). **Concluzii.** Laparotomia „de rutină” pentru traumatismul abdominal deschis determină o rată inacceptabil de mare de intervenții inutile. Laparoscopia diagnostică este miniinvasivă, diminuează incidența laparotomiilor „albe”, însă metoda are acuratețe joasă și generează un număr mare de proceduri inutile. Abordarea nonoperatorie minimizează rata intervențiilor invazive și reduce semnificativ durata spitalizării. Pacienții cu traumatism abdominal deschis necesită abordare diferențiată în baza examenului clinic. **Cuvinte cheie:** traumatism abdominal deschis, tactica medico-chirurgicală diferențiată

## DIFFERENTIATED APPROACH IN PENETRATING ABDOMINAL TRAUMA, ONE CENTER EXPERIENCE

**Introduction.** Due to the lack of an unanimous accepted approach of traumatized with penetrating abdominal wounds the algorithm is ranging from mandatory laparotomy to nonoperative in selected cases. Tactics are developed according to the surgeon's personal preferences and traditions of the clinic. **Purpose.** Comparative analysis of the results of various approaches in this kind of trauma. **Materials and methods.** Study was performed in 2006-2010, includes 469 consecutive patients with penetrating abdominal trauma hospitalized in Chisinau emergency hospital. The injury of peritoneum was present in - 245; absent in - 210; inconclusive - 14. During the reported period tactical approach evolved from exploratory laparotomy (2006-2007), to diagnostic laparoscopy (2008-2009) and finally - the nonoperative approach (2010). **Results.** The incidence of positive laparoscopy increased from 39.5% to 82.4%. The rate of therapeutic laparotomies was 47.5-54.5% for “routine” laparotomy group, 56.7-65.8% for diagnostic laparoscopy group and 94.4% - for clinical examination group. Duration of hospital stay decreased from  $9.68 \pm 0.75$  for the mandatory laparotomy approach to  $5.03 \pm 0.62$  days for the nonoperative group ( $p < 0.001$ ). **Conclusions.** Mandatory laparotomy for penetrating abdominal trauma causes an unacceptably high rate of nontherapeutic interventions. Diagnostic laparoscopy is minimally invasive, reduces the incidence of unnecessary laparotomies, but the method has low accuracy and generate a large number of useless procedures. Selective nonoperative approach minimizes the rate of invasive interventions significantly reduce the hospital stay. Patients with penetrating abdominal trauma require individual approach based on clinical examination. **Key words:** penetrating abdominal trauma, differentiated approach