RECENT TRENDS IN THE MANAGEMENT OF SPLENIC AND LIVER TRAUMA

Essay

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General Surgery

By

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List of Abbreviation

AAST	American association for surgery of trauma
ACS	American college of surgeons
AE	Angioembolization
AIS	Abbreviated injury scale
ATLS	Advanced trauma life support
BAT	Blunt abdominal trauma
CEUS	Contrast enhanced ultrasound
DPL	Diagnostic peritoneal lavage
FAST	Focused abdominal sonography for trauma
GCS	Glasgow Coma Scale
LMWH	Low molecular weight heparin
LP	Laparoscopic
MDCT	Multidetector CT
MSA	Superior mesenteric artery
NOMSI	Non operative management of splenic injuries
NOMLI	Non operative management of liver injury
OR	Operating room
OPSI	Overwhelming post splenectomy infection
PS	Primary survey
RR	Respiratory rate
RTS	Revised trauma score
SBP	Systolic blood pressure
SNOM	Stab non operative management
SS	Secondary survey
TS	Trauma score

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الاتجاهات الحديثة فى تشخيص وعلاج اصابات الكبد والطحال

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مقدمة كجزء من متطلبات درجة الماجستير في الجراحة

من

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First and foremost thanks to ***Allah*** *the most kind and most merciful to whom we owe any success in our life.*

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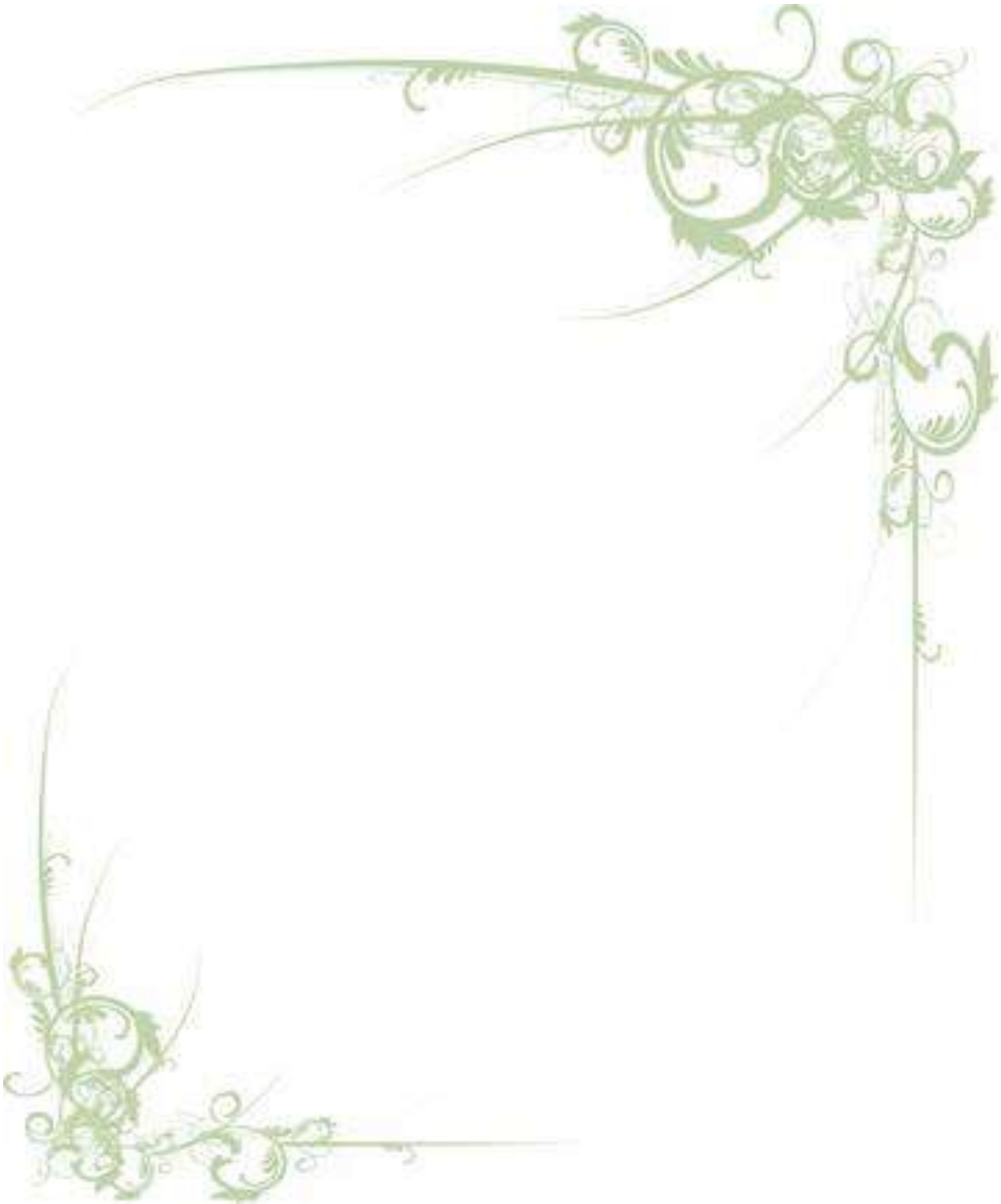
قَالُوا سُبْحَانَكَ
لاَ عِلْمَ لَنَا
إِلاَّ مَا عَلَّمْتَنَا
إِنَّكَ أَنتَ
الْعَلِيمُ الْحَكِيمُ

صدق الله
العظيم

الآية (٣٢) سورة البقرة



Introduction

The solid organs of the abdomen are generally considered to be the liver, the spleen, and the two kidneys. These organs are injured most frequently by strong blows to the abdomen, back, or flank regions such as may occur in automobile accidents, crashes, and contact sports. Because these organs are solid, they tend to tear or crack when struck with significant force. These tears have a tendency to bleed due to the large amount of blood flow these organs receive. In some cases, the bleeding is life threatening. **(Farnell et al., ٢٠٠٠)**

The spleen is the most common solid organ injured after blunt abdominal trauma. Splenic injuries may occur in isolation or in association with other solid organ or hollow viscous injuries. The liver is the second most commonly injured organ in abdominal trauma, but damage to the liver is the most common cause of death after abdominal injury. The most common cause of liver injury is blunt abdominal trauma, which is secondary to motor vehicle accidents in most instances **(Acker et al., ٢٠٠٤)**

There is conflicting evidence concerning the prevalence of liver involvement in patients with trauma. The prevalence of liver injury in patients with blunt multiple traumas vary from ١ to٨٪ **(Matthes et al., ٢٠٠٣).** One of the largest studies

that addressed hepatic trauma reported a prevalence of ٤,٢٪ about a trauma population of ٢٦٠٣٠ patients **(Clancy et al., ٢٠٠١).** In the database of the North Carolina Department of Health and Human service, this prevalence is higher, reaching ٨٪ whereas in the German polytrauma registry, it reached ٧,٢٪ **(Bardenheuer et al., ٢٠٠٠).**

Several classification systems have been proposed in an attempt to incorporate the aetiology, anatomy and extent of injury and correlate it with subsequent clinical management and outcome. The widely accepted Organ Injury Scale is based on anatomical criteria that quantify the disruption of the liver parenchyma and defines six groups which may influence management strategies and relate to outcome such as Rationale and principles of liver trauma classification, Reported schemes for the classification of liver trauma, Classification based on the extent of injury and intraoperative findings, Vascular injury classification, Organ Injury Scale (the Organ Injury Scaling Committee of the American Association for the Surgery of Trauma – AAST) classification and Radiological classification **(Poletti et al., ٢٠٠٤).**

With the shift toward nonoperative management, most hepatic injuries are managed nonoperatively. On the other hand, up to two-thirds of high-grade hepatic injuries require laparotomy; these cases are technically difficult and

challenging. Damage-control approaches, understanding of liver anatomy, and advances in technology have dramatically changed the approach to hepatic trauma, with improved outcomes. Anatomic or nonanatomic liver resection is required in ٢٪ to ٥٪ of liver injuries. Mortality with liver injury following resection is ٩٪ with current advances **(Piper and Peitzman, ٢٠١٠).**

Aim of the work

This work aiming to give us a framework about liver and spleen trauma and how we could decrease number of mortalities and morbidities following spleen & liver trauma and to review recent concepts in management of trauma.