

Non-Operative Management of Blunt Hepatic Trauma

Essay

Submitted for partial fulfillment of master degree
in General Surgery

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بسم الله الرحمن
الرحيم
ربى أوزعنى
أن أشكر نعمتك
التي أنعمت على
وعلى والدى و أن
أعمل صالحا ترضاه
و أدخلني برحمتك
في عبادك
الصالحين
صدق الله العظيم

سورة النمل

Acknowledgement

First and foremost, thanks to "ALLAH" for granting me the power to accomplish this work.

I would like to express my endless gratitude to

Prof. Husam Eldeen Hassan Hussin
Azazy

Professor of general surgery

Faculty of Medicine - Ain Shams University

For giving me the honor to work under his supervision and providing me with a lot of encouragement.

Also my deep thanks to

Dr. Wafiq Fouad Salib

Lecturer of general surgery

Faculty of medicine - Ain Shams University

For his generous assistance, valuable guidance and unfailing efforts during the whole period of the study.

Finally I would like to thank my parents and my wife for their great support and advice also my best regards for my friend Dr: Sameh for being my friend.

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List of abbreviations

AAST.....American Association for the Surgery of Trauma

AIS..... Abbreviated Injury Scale

APACHEAcute Physiology and Chronic Health Evaluation

APS..... Acute Physiology Score

AEAngioembolization

BrBranch

CES..... Contrast-Enhanced Sonography

CTComputed Tomography

DCLDamage Control Laparotomy

DCSDamage Control Surgery

DL.....Diagnostic Laparoscopy

DPLDiagnostic Peritoneal Lavage

EDEmergency Department

ERCP.....Endoscopic Retrograde
Cholangiopancreatography

FAST.....Focused Abdominal Sonography for
Trauma

GB.....Gall Bladder

GCS.....Glasgow Coma Scale

HIDAHepatobiliary Iminodiacetic

HUHounsfield Units

ICD.....International Classification of Diseases

ISS..... Injury Severity Score

IVC.....Inferior Vena Cava

LHVLeft Hepatic Vein

MHVMiddle Hepatic Vein

MRI.....Magnetic Resonance Imaging

NISSNew Injury Severity Score

NOMLI.....Non-operative Management of Liver Injuries

OISOrgan Injury Scale

OISCOrgan Injury Scaling Committee

RHV..... Right Hepatic Vein

RTS..... Revised Trauma Score

RR..... Respiratory rate

SATE.....Selective arteriography and transcatheter embolization

SBP.....Systolic Blood Pressure

SMVSuperior Mesenteric Vessels

SOFA.....Sequential organ failure assessment

SIRS.....Systemic Inflammatory Response Syndrome

WBC.....White Blood Cell

Introduction

Abdominal trauma is a major cause of death. Nearly 40% of deaths from abdominal trauma are due to blunt trauma caused primarily by motor vehicle accidents. In these circumstances, abdominal trauma is often associated with head, chest, and extremity injury. Delay in diagnosis and treatment is a major contributing factor to mortality, which is often due to hemorrhage, sepsis, and multiple organ failure. (**Gastrointestinal Surgery.**, 2006).

Hepatic injuries are one of the most common abdominal injuries following either blunt or penetrating trauma. CT scanning has revolutionized the treatment algorithm for these patients. The majority of patients are successfully treated with nonoperative management, but surgeons should have a clear understanding of the indications for operative intervention. An array of techniques including operative, interventional, and endoscopic, are often required for management of advanced grade hepatic injuries. (**Clay C. Cothren et al., 2008**).

Severe hepatic injuries require surgical intervention due to hemodynamic instability. Low-grade injuries can be managed nonoperatively with excellent results, while patients with hepatic trauma with associated organ injuries require surgery, because they continue to have significantly higher mortality. **(Stavros Gourgiotis, et al., 2007).**

To manage severe liver trauma (American Association for the Surgery of Trauma grade III to grade V), procedures such as packing of the laceration with omentum, hepatectomy or direct control of bleeding vessels within the liver substance by means of the Pringle maneuver, selective hepatic artery ligation, retrohepatic caval repair with total hepatic vascular occlusion, and perihepatic packing were selected and combined based on the specific injury. **(Jing-mou Gao, et al., 2004).**

During the past 2 decades, management of blunt hepatic injuries has changed dramatically. Nonoperative management of hemodynamically stable patients is now the standard of care. Successful nonoperative management of splenic injuries, the high rate of nontherapeutic laparotomies with associated complications in patients with liver injuries, the refinement of computed tomographic (CT) scanning, and more aggressive use

of interventional radiology have all contributed to this dramatic change. **(Kozar, Rosemary A, et al., 2006).**

Although the liver is the abdominal organ most commonly injured after blunt trauma, the majority of injuries are relatively minor. Operative management of these patients often results in a nontherapeutic exploration because the liver usually has stopped bleeding. Operative management of the more severe liver injuries, however, is associated with significant morbidity and mortality. **(Martin A. Croce, et al., 1995).**

Aim of the work

The aim of the work is to evaluate the non-operative management of blunt hepatic trauma regarding the prognosis and benefits and risks.



Surgical anatomy of the liver
