# INTRODUCTION

The liver and spleen are the most commonly injuried abdominal organs after penetrating and blunt trauma **(Meredith et al., 1994).**

Over the last 10 years, there has been a dramatic change in the management of hepatic injury, specifically its non-operative management **(Carrillo et al., 1998).**

Clinically and experimentally, it has been shown that bleeding from injured liver can cease spontaneously, hence strategies that advocate selective non-operative management has evolved **(Bond et al., 1996).** Such a policy is possible because of improvements in resuscitation, intensive care and monitoring of trauma patients, coupled with advances in diagnostic radiology **(Turnock et al., 1993).**

Over the past 15 years, there have been dramatic changes in the management of blunt hepatic trauma, specifically in the imaging techniques, and in the non-opeative management. Actually, in more than 80% of blunt hepatic trauma, non-operative management is used. In the last 20% the surgical option has to be taken without delay, sometimes in extreme emergency, using the adapted surgical techniques **(Letoublon and Arvieux, 2002).**

They hypothesized that liver repair proceeds in four stages (1) resorption of blood (2) Coalescence of laceration (3) decrease in size of the defect and (4) restoration of liver homogeneity after 3-4 months **(Carrillo et al., 1998).**

In the light of such observation and encouraging reports

from many major trauma centers in USA, Europe **Watson et al. (1991);** and **Feliciano et al. (1992)** non-operative management of blunt hepatic injury in adults and children has increased dramatically in the past 10 years.

Non-operative management has been the standard method of care of pediatric patients for the past 20 years, with a success rate of around 90% **(Oldham et al., 1986).**

Currently in the adult population, non-operative management of blunt hepatic injury ranges from 50 to 82% of all injuries reported **(Pachter and Feliciano, 1996).**

Criteria for non-operative management include (1) simple hepatic parenchymal laceration or intrahepatic hematoma (2) absence of active hemorrhage (3) hemoperitonium of less than 500ml (4) limited need for liver related blood transfusion (5) absence of diffuse peritoneal signs in patients not neurologically impaired (6) absence of other peritoneal injuries that would otherwise require an operation **(Keller et al., 1985).**

Conservative management of liver injury was described initially for Grades I-III injuries **(Pachter et al., 1996).**

Currently, clinical experience shows that some hemodynamically stable patients with complex hepatic injuries (grades IV and V) may be safely managed without operation **(Meredith et al., 1994).**

**Feliciano (1992)** has proposed non-operative management for any hepatic injury, regardless of its magnitude if the patient is hemodynamically stable.

Of all the variables evaluated, hemodynamic stability

appears to be the most crucial and has become the decisive factor in favor of undertaking non-operative management **(Parks et al., 1999)**.

Patients who are hemodynamically stable and who have no indication for laraprotomy are ideal candidates for evaluation by Ultrasonography and/or abdominal CT **(Carrillo et al., 1998)**.

Documentation of either improvements or resolution of the hepatic injury by CT was once considered an essential criterion for continuing with non-operative approach, but this no longer seems to be necessary and no alternation in management is indicated unless there is some change in the patient clinical course **(Meredith et al., 1994)**.

It is not uncommon to read reports describing successful conservative management of blunt hepatic trauma in over 85% of cases and this is expected to be consistently over 90% in the near future **(Pachter et al., 1996)**.