ABSTRACT... Objectives: To determine the role (frequency) of non-operative conservative management in liver injuries in blunt abdominal trauma. Methodology:... Study Design: Descriptive study. Setting: Department of surgery Peoples University of Medical & Health Sciences Nawabshah. Period: 36 months extending from August 2014 to July 2017. Patients & Methods: All Patients with abdominal blunt trauma underwent ABCD evaluation, primary survey, secondary survey and initial management/resuscitation as per needed. History, clinical examination, plain radiographs, ultrasound (FAST) and computerized tomography were used as diagnostic tools. Patients with isolated liver injuries in blunt abdominal trauma were selected for the present study. Selected cases with hemodynamic instability, even after initial vigorous resuscitation had to undergo immediate surgical abdominal exploration while the rest of the selected cases were hospitalized and kept under strict monitoring. The decisions of late surgical intervention were then made on deterioration of hemodynamic stability and rapid progression of liver injuries from lower grades to higher grades. Percentages of the cases managed conservatively and rest of others who required surgical interventions were noted. Data was analyzed on SPSS-21. Results: 78 cases were selected with mean age of 38 years & SD± 7. Male to female ratio was 5:1. 11% of the cases with hemodynamic instability underwent immediate surgical intervention. 8% of the cases underwent late surgical operative management after initial course of non operative conservative management. 81% cases were managed with successful non operative conservative approach. Conclusion: Most of the liver injuries in blunt abdominal trauma require non-operative conservative management. The decision of operative management should be taken on the basis of the hemodynamic status and not merely on the grade of the hepatic injury.

Key words: Blunt Abdominal Trauma, Liver Injuries, Non-operative Management of Liver Injuries.
and gross organ displacement. Abdominal Ultrasonograms can detect a number of blunt traumatic hepatic lesions, such as contusions, hematomas, bilomas, and hemoperitoneum. To determine any surgical intervention in blunt abdominal trauma the role of CT scan is now very well established. In hemodynamically stable patients of blunt hepatic injuries nonoperative management is the treatment modality of choice in current surgical practice, irrespective of the grade of injury or patient age. The nonsurgical conservative management of blunt liver trauma should only be practiced in a surgical environment that is capable of monitoring, serial clinical evaluations, and facilities of urgent interventions. In hemodynamically unstable and peritonitis an emergent surgical intervention is still warrant. Blunt abdominal trauma with liver injuries is a common challenge in almost every discipline of surgical management and demands a continuous close insight review, therefore, this descriptive study was conducted to determine the frequency of conservative management in blunt traumatic liver injuries.

**MATERIAL & METHODS**

This 36 months study was conducted in surgical unit 1 of People University of Medical and Health Sciences for Women Nawabshah from August 2014 to July 2017. All Patients with abdominal blunt trauma underwent ABCD evaluation, primary survey, secondary survey and initial management/resuscitation as per needed. History, clinical examination, plain radiographs, ultrasound (FAST) and computerized tomography were used as diagnostic tools. Patients with isolated liver injuries in blunt abdominal trauma were selected for the present study. Cases of liver injuries with associated diaphragmatic, mesenteric, hollow viscus and other solid organ injuries were excluded. Patients with associated head injuries and bony fractures were also not considered for the present study. Selected cases with hemodynamic instability even after initial vigorous resuscitation had to undergo immediate surgical abdominal exploration while rest of the selected cases were hospitalized and kept under strict monitoring to observe the hemodynamic stability. Progressive course of the liver injuries were serially followed by ultrasonograms and CT scans. Liver injuries were graded as grade I to IV according to American Association for the Surgery of trauma (AAST). The decisions of surgical intervention were made on deterioration of hemodynamic stability and rapid progression of liver injuries from lower grades to higher grades. Percentages of the cases managed conservatively and rest of others who required surgical interventions were noted. Data was analyzed on SPSS-21.

**RESULTS**

This descriptive study was extended up to 36 months. 78 cases were selected according to inclusion and exclusion criteria’s. 65 were male and 13 were females with male to female ratio of 5:1. Mean age of the cases was 38 years, SD± 7 and range of 11 to 80 years. 9(11.5 %) cases had grade 1 injury, 22(28.2%) cases had grade 2 injuries, 30(38.5%) had grade 3 injuries, 8(10.3%) cases had grade 4 injuries, 9(11.5%) had grade 5 injuries. 9(11.5%) cases were underwent immediate surgical exploration, 5 of them had grade 5 injuries, 3 of them had grade 4 injuries and 1 patient had grade 3 hepatic injury. Remaining 69 cases were initially started with non-operative conservative management with strict monitoring but 6 out of them had to undergo surgical intervention because of hemodynamic instability. 62 cases managed conservatively. Collectively among 78 cases of blunt trauma abdomen with isolated liver injury 15(19%) cases required surgical intervention while 62(81%) were managed conservatively.

**DISCUSSION**

Majority of the hepatic injuries are caused by road traffic accidents. Most of the hepatic injuries of grade I to III are successfully managed with non operative conservative management and almost two-thirds of grades IV to VI hepatic injuries require surgical operative management. For the last few decades the improvement in the diagnostic and therapeutic tools has greatly changed the management approach in blunt hepatic injuries. The decisions of operative management has been relying more on the clinical conditions of the injured patients rather the grade of hepatic injury. In the current study the
number of cases is not too large because most of the cases of the blunt abdominal trauma had involved more than one organ injuries. Mean age is 38 years that is compare able to Mukhopadhyay M study (35 years). This mean age is reflecting the fact that young and middle aged part of the population is the main user of automobiles for traveling and the leading working segment of the society, become more prone to trauma. Similarly the male gender predominates in exertional socio-economic activities in our part of the world as male to female ratio was 5:1 in the current study that is similar to Richard et al. 9(11.5%) of the cases underwent immediate surgical intervention as 5 of them had grade 5 injuries, 3 of them had grade 4 injuries and 1 patient had grade 3 hepatic injury, although supporting the general prevailing surgical approach of higher the grade, higher the chances of surgical interventions but the stronger deciding factors were hemodynamic instability rather the grade of the hepatic injury. After the initial course conservative non-operating management 6(8%) underwent surgical intervention because of deterioration in hemodynamic stability. Total 15(19%) of the cases had needed surgical interventions in the form of laparatomies while 63(81%) were successfully managed with non-operative conservative management that is within the range of worldwide data. These results strongly advocates the effective role of non-operative conservative management in most of the liver injuries in blunt abdominal trauma and hemodynamic stability of the injured cases is the key role in deciding between operative and non operative management.

CONCLUSION
Most of the liver injuries in blunt abdominal trauma require non-operative conservative management. The decision of operative management should be taken on the basis of the hemodynamic status and not merely on the grade of the hepatic injury.

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REFERENCES


"Fake love is worse than real hate." – Unknown –

AUTHORSHIP AND CONTRIBUTION DECLARATION

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