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A study on blunt abdominal trauma admitted in JLNMCH, Bhagalpur, Bihar

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ABSTRACT ***Background:*** *The most common surgical problem coming to the emergency department in our hospital is due to blunt abdominal trauma, which leads to severe morbidity and mortality to the patients. Identification of serious intra-abdominal pathology is often challenging. Many injuries may not manifest during initial assessment and treatment time. The aim of this study is to rapid diagnosis of the condition, work up of the patient, proper management and care to reduce the mobidity and mortality in the patients.* ***Materials and Methods:*** *In this study, 100 cases of blunt abdominal injuries patient admitted in emergency department were taken. Study was done in surgery department of JLNMCH, Bhagalpur, Bihar from January 2016 to December 2016. All cases were registered fulfilled the inclusion criteria and exclusion criteria. Results were analysed statistically.* ***Results:*** *In our study, the commonest age group presented was between 15-25 years of age followed by 25-35 years of age group. Male were more than females. In 70 cases there was intestinal perforation, in 20 cases there was liver injury, in 5 cases splenic injury, in 2 cases injury to kidney, in 1 case there was injury to the pancreas and diaphragm each. Road traffic accident was the commonest cause of the injuries. 90 patients were operated timely. 76 patients survived, 24 patients died.* ***Conclusion:*** *Blunt abdominal trauma is increasing in number due to more road traffic accidents. Ultrasonography was very helpful in diagnosis of the condition for early management. Reduction in mortality rate was found.*

KEYWORDS : Blunt abdominal trauma, Intestinal perforation, Ultrasonography, Road traffic accident.

Introduction-

Blunt abdominal trauma is on the rise. And there is a high risk and danger to life. Trauma continues to be a major public health problem worldwide and it is associated with high morbidity and mortality in every country, regardless of the level of socioeconomic development. Trauma is reported to be the leading cause of death, hospitalization, and long-term disabilities in the first four decades of life. Globally, approximately one third of trauma patients have abdominal trauma and it accounts for a large fraction of tragic loss of life and unrecognized abdominal injury remains a distressing frequent cause of preventable death. RTA is the most commonest cause of this condition worldwide. Blunt injury of abdomen is also a result of fall from height, assault with blunt objects, sport injuries, industrial mishaps, bomb blast and fall from riding bicycle. Intestine is the most commonly injured organ in blunt trauma. Patient may present with severe peritonitis with rapidly progressing combination of hypovolemic and septic shock which can be lethal over a short period of time. Mortality increases with the number of associated injuries. In open abdominal injuries, the diagnosis and management is better than the closed abdominal injuries. There has been increasing trend towards non operative management (NOM) of blunt trauma amounting to 80% of the cases with failure rates of 7-8%. NOM is a standard protocol for hemodynamically stable solid organ injuries.

Materials and methods

In this study, 100 cases of blunt abdominal injuries patient admitted in emergency department were taken. Study was done in surgery department of JLNMCH, Bhagalpur, Bihar from January 2016 to December 2016. All cases were registered fulfilled the inclusion criteria and exclusion criteria. Results were analysed statistically Inclusion criteria include patients admitted with history of blunt trauma abdomen due to road traffic accidents, accidental falls, trauma by blunt objects and assault.

Exclusion criteria include head injuries, chest injuries, pregnant ladies and any fracture bones.

Urgent ultrasonography (FAST) and required X-rays were done with routine blood investigations.

Results-

In our study, the commonest age group presented was between 15-25 years of age followed by 25-35 years of age group. Male were more than females. In 70 cases there was intestinal perforation, in 20 cases there was liver injury, in 5 cases splenic injury, in 2 cases injury to kidney, in 1 case there was injury to the pancreas and diaphragm each. Road traffic accident was the commonest cause of the injuries. 90 patients were operated timely. 76 patients survived, 24 patients died. 80 patients were operated and 20 patients were subjected for non- operative management. Road traffic accident was responsible for 70% of blunt abdominal trauma cases, while fall from heights accounted for 15% of cases and blow with blunt object was responsible for 15% of injuries. Majority of the patients presented with abdominal pain (90%) and abdominal tenderness (82%). Associated extra abdominal injuries were found in 30 cases.

Discussion-

Considerable forces are usually required to injure solid and hollow viscera in abdomen. Three basic mechanism explains the injury to abdominal organs i.e. deceleration, external compression and crushing injuries. Abdominal trauma continues to be a major cause of trauma admission all over the world and contributes significantly to high morbidity and mortality (Abbas & Upadhyay, 2004). In this review, abdominal trauma accounted for 14.1% of all trauma admissions seen during the study period in our setting. This concurs with a figure of14.2% reported by Ruhindaet al(2008) in Uganda, but at variant with other studies (Chalya et al, 2010; Chalya et al, 2012) that reported high figures of abdominal trauma. Blunt abdominal trauma accounts for more than half the cases of abdominal trauma here. So does study done by Williams and Zollinger (Kennedy) on 200 cases of abdominal trauma. The study was done at Massachusetts General Hospital also showed similar findings.12 Blunt abdominal trauma was commonly seen in the 3rd decade of life, in farmers and had a male preponderance. This is because males are more exposed to outdoor activity and farming while women are still the homely type in a rural area like ours. Road traffic accident is the commonest cause of blunt abdominal trauma. Motor vehicle accidents (75%) and urban violence are the leading cause of blunt and penetrating abdominal trauma to this area of the body. The danger of visceral or fatal hemorrhage in blunt abdominal trauma makes it one of the most important types of trauma and one for which the doctor's decision as to the early correct diagnosis and proper early intervention may be the difference between life and death for the person concerned. Asuquo et al performed a similar study on 19 BAT patients and reported road traffic accidents as the most common cause for BAT which is consistence with the findings of present study. Srihari et al performed a similar study and revealed that among all BAT patients most of them were managed surgically whereas only 31.6% were treated conservatively. Similarly, in

present study most of the patients were treated surgically which is similar to the reports by Srihari et al.

Conclusion-

Blunt abdominal trauma is increasing in number due to more road traffic accidents. Ultrasonography was very helpful in diagnosis of the condition for early management. Reduction in mortality rate was found. Males were more in number than females. Surgical approach is better than conservative approach. Intestinal perforation was most commonly found in blunt abdominal injuries. Ultrasound helped a lot in early diagnosis and management of the cases.

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