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Research Article

**A CROSS-SECTIONAL STUDY TO IDENTIFY THE
RETROPERITONEAL PARTS INJURIES REGULARITY MOOD
WHICH LEADS TO ABDOMINAL TRAUMA**¹Dr Bilal Sher Khan, ²Dr. Gohar Ali, ³Dr. Misbah Ijaz¹ Medical officer, DHQ MTI D I Khan.²Demonstrator, Sahara Medical College, Narowal³Pmdc 93184-P, THQ Pattoki, Kasur**Abstract**

Objective: The objective of the research was to identify the regularity of mood of retroperitoneal parts injuries succeeding to abrupt abdominal wounds.

Material and methods: The design of the research was cross-sectional, performed at Mayo Hospital, Lahore from May to November 2017. The number of abdominal injuries patients enrolled for research was one hundred.

Results: Total of one hundred patients having a record of abdominal injuries enrolled for research. The mean age of the entire patients was (38.12 ± 11.34) years. The number of patients got injuries through road mishaps were sixty-one (sixty-one percent) along with eleven (eleven percent) physical strike and twenty-eight (twenty-eight percent) slip from a height case. In our research, the researcher recorded pancreas injuries in twenty-four (twenty-four percent) patients along with twenty-eight (twenty-eight percent) and thirty-two (thirty-two percent) Duodenum and kidney injured patients respectively. The researcher also identified important relation in causes of injury along with gender and patients age.

Conclusion: The common most factor of abrupt abdominal injuries are road accidents as well as most patients were identified with injuries of the kidney.

Keywords: Duodenum, Retroperitoneal Organs and Pancreas Injuries.

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INTRODUCTION:

With respect to other progressing states, trauma is the most prevalent avoidable factor of demise as well as bitterness in Pakistan [1]. Accidental trauma gave a grade as fourth among the prominent factor of causalities in Pakistan. Accidental trauma constitutes eight percent of the entire causalities in our Pakistan. The number of people died with accidents are almost 0.14 million as well as almost twice of this figure are disable annually due to severe injuries [2]. Injuries to a body by interchanging atmosphere potency which is over body's resilience is called trauma. Because of greater surface volume, the abdomen is the common most injured zone of the human body [3, 4]. The isolated organ of the abdomen from peritoneum preliminary via the eventual peritoneal fascia is retroperitoneal along with restricted subsequently via transversals of fascia [5]. The retroperitoneal part consists of colon, kidney, abdominal aorta, IVC, pancreas, adrenal gland, and duodenum portion. Nearly seventy-five percent of the abrupt abdominal wounds supervene intense injuries [6]. Wounds of chest and bones along with a fracture of the head are abrupt abdominal related traumas. Whereas the determination of performing laparotomy for intense abdominal injuries is much complicated as well as challenging just like structural injuries being lesser ostensive. The most difficult zone of the abdomen is retroperitoneum. The wounds to the parts of retroperitoneum developed mostly in polytrauma patients [8]. Retroperitoneal parts wounds are the most disastrous wounds experienced by trauma patient and the most usual elements of injuries are road collapses, slipped out from the heights, physical strike and animal collision [9]. Detriment to retroperitoneal agents is familiar to develop in an expressive minority of the patients of intense abdominal trauma [10].

MATERIAL AND METHODS:

The design of the research was cross-sectional, performed at Mayo Hospital, Lahore from May to November 2017. The number of abdominal injuries patients enrolled for research was one hundred. earlier to start of the study, the researcher achieved an approval from the panel of institutional review along with getting permission from guardians and patients. The researcher selected the entire one hundred patients of abrupt abdominal injuries irrespective to gender discrimination possessing age between twelve to sixty years and experienced exploratory laparotomy. The recognition of deep abdominal wounds was developed on the ground of subsistence of compassionateness, rigidity along with discolouration on the wall of the abdomen. Researcher included the entire those patients in the

research which are presented within twelve hours of nourishing injuries and expelled those who are treated beyond operation, entire patients experiencing through a variant type of intruding abdominal wounds along with deceased ASA-5 patients. The researcher recorded demographic information of all the patients on specifically designed Performa for said objective along with a recording of wound condition and intra-abdominal wounds consisting of pancreas, kidney, and duodenum. The researcher applied the scale formulated via Organ Injury Scaling Committee of the American Association for the Surgery of Trauma, to categorize the wounds to different organs. The concern specialist validates injuries categorization. Researcher judges the composed data via applying SPSS and calculate average along with standard deviation for numerical information's and commonness as well as a percentage for categorical information's, used chi-square test to diagnosed relation invariant variables. P value = five percent was supposed as important.

RESULTS:

The number of abdominal injuries patients enrolled for research was one hundred. The mean age of the entire patients was (38.12 ± 11.34) years. The number of patients got injuries through road mishaps were sixty-one (sixty-one percent) along with eleven (eleven percent) physical strike and twenty-eight (twenty-eight percent) slip from a height cases In our research, researcher recorded pancreas injuries in twenty-four (twenty-four percent) patients among them five (20.33%) patients identified with category I succeeded by nine (38.37%) in category II, five (20.83%) in category III, four (16.67%) in category four and only one (4.17%) identified with category five injuries. Researcher also recorded duodenum injuries in twenty-eight (twenty-eight percent) patients among them four (14.29%) patients identified with category I succeeded by fourteen (50%) in category II, six (21.43%) in category III, three (10.71%) in category four and only one (3.57%) identified with category five injuries. The number of patients identified with kidney injuries is thirty-two (thirty-two percent) along with sixteen (sixteen percent) patients of pancreatoduodenal injury. The number of patients got injuries through road mishaps were sixty-one (sixty-one percent) comprising of forty-nine male (81.82%) and twelve (19.67%) female patients. The number of patients got injuries by falling from height were twenty-eight (twenty-eight percent) comprising of ten (35.71%) female and eighteen (64.29%) male patients, as well as among eleven (eleven percent) physical strike injuries cases, seven (63.63%) and four (36.36%) was male and female respectively. no statistically important relation

was identified between gender along with injury mode with P value = 0.196. among sixty-one road accident patients, forty-one (67.21%), eighteen (29.51%) and two (3.28%) patients associated with age category of twelve to thirty-five, thirty-six to fifty and fifty-one to seventy years respectively. among twenty-eight fallen from height cases, fourteen (50%), nine (32.14%) and five (17.86%) patients associated with age category of twelve to thirty-five, thirty-six to fifty and fifty-one to seventy years respectively. Among eleven (eleven percent) physical strike patients six (54.55%) associated to age category of twelve to thirty-five, three (27.27%) associated to age category of thirty-six to fifty and

two (18.18%) was associated to age category of fifty-one to seventy years. whereas nil relation was identified in injury mode and age of the patients with (P-value = 0.148).

Table – I: Overall Injury Mode Stratification

Overall Mode	Percentage
Physical Assault	11
Height Fall	28
Road Accidents	61

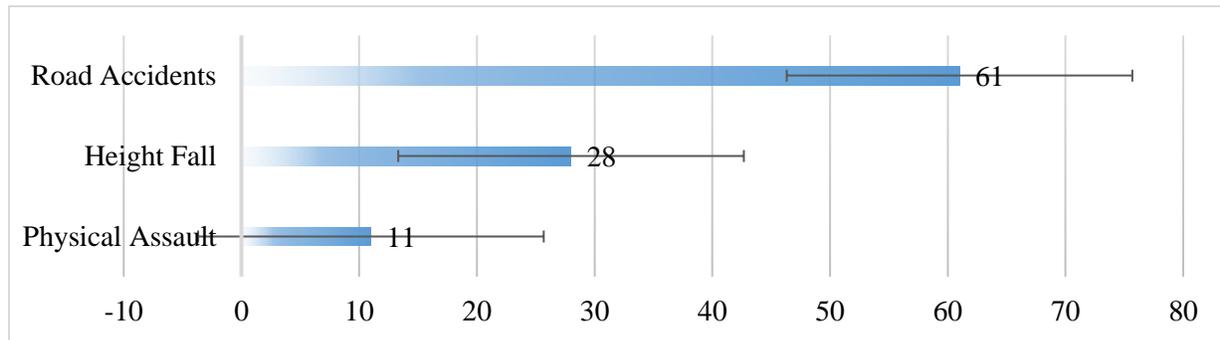


Table – II: Grade of Injury with respect to Injured Organs

Organ injury	Grade - I		Grade - II		Grade - III		Grade - IV		Grade - V		Total
	No	%	No	%	No	%	No	%	No	%	
Kidney	5	15.6	10	31.3	8	25	6	18.8	3	9.38	32
Duodenum	4	14.3	14	50	6	21.4	3	10.7	1	3.57	28
Pancreas	5	20.3	9	38.4	5	20.8	4	16.7	1	4.17	24
Pancreatoduodenal	11	68.8	4	25	1	6.25	0	0	0	0	16

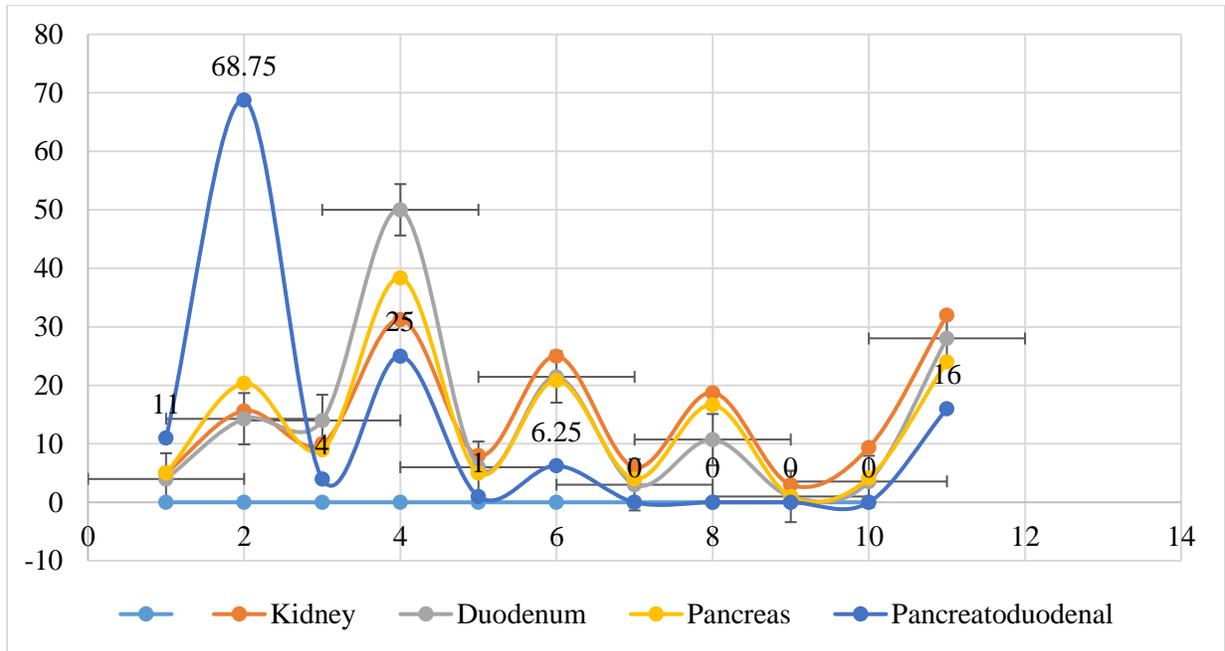
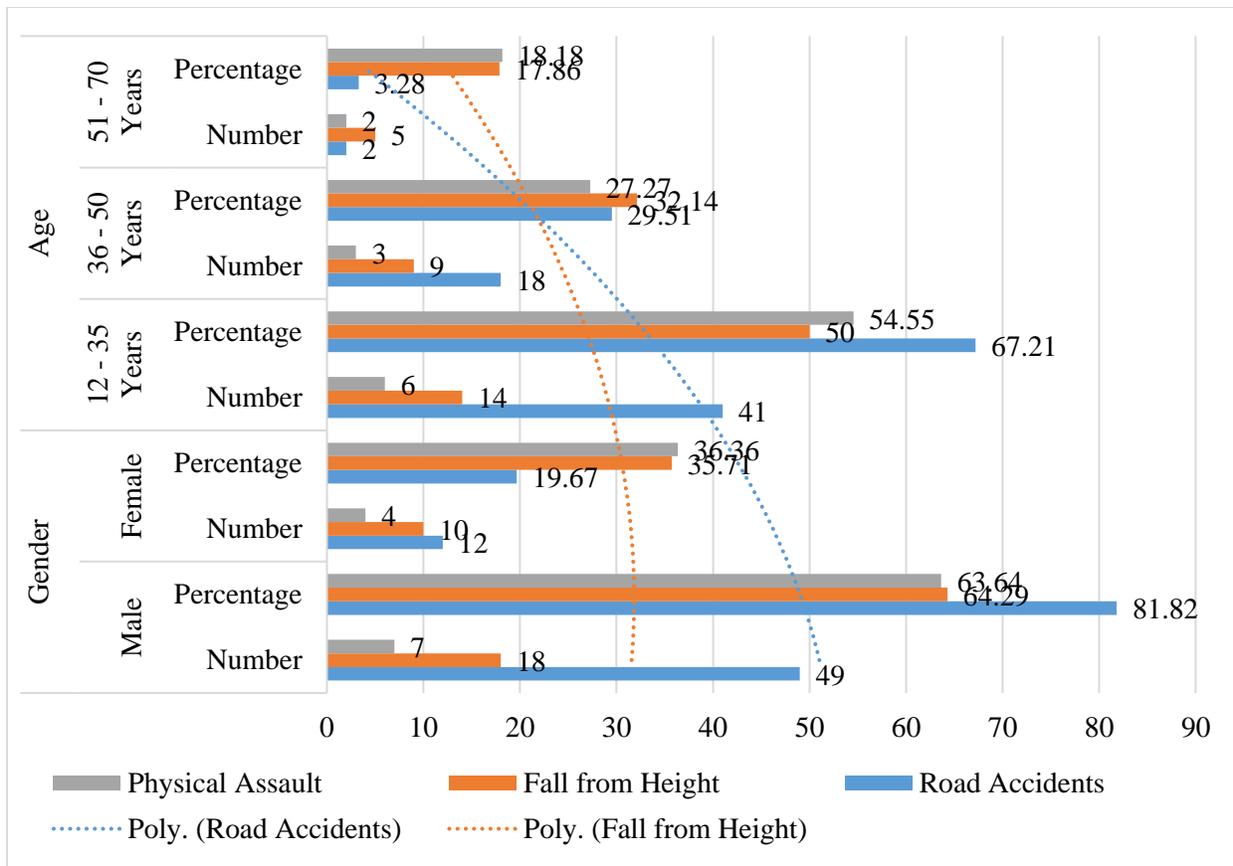


Table – III: Injury Mode with respect to Age and Gender

Mode of injury		Road Accidents	Fall from Height	Physical Assault	
Gender	Male	Number	49	18	7
		Percentage	81.82	64.29	63.64
	Female	Number	12	10	4
		Percentage	19.67	35.71	36.36
	Total		61	28	11
P-Value		0.196			
Age	12 - 35 Years	Number	41	14	6
		Percentage	67.21	50	54.55
	36 - 50 Years	Number	18	9	3
		Percentage	29.51	32.14	27.27
	51 - 70 Years	Number	2	5	2
		Percentage	3.28	17.86	18.18
	Total		61	28	11
P-Value		0.148			



DISCUSSION:

In current research, the males’ patients were mostly influenced with abdominal injuries with respect to females’ patients (seventy-four against twenty-six percent), uniform results were presented by Khan et al, with respect to this research young age individuals associated with age category of twenty to thirty years were the regular most victim of abrupt abdominal injuries [6]. In this research, the number of patients got injuries through road mishaps were sixty-one (sixty-one percent) along with eleven (eleven percent) physical strike and twenty-eight (twenty-eight percent) slip from a height case. Several additional types of research also displayed as road mishaps, fallen from a height and physical collision are the major element of intense abdominal injuries [12, 13]. Ahmed et al too reported intense abdominal injuries as the prominent factor of causalities in patients of one to forty-four years age category [9]. Deep abdominal trauma subject for seventy-nine percent patients and the males’ patients were mostly influenced with abdominal injuries with respect to females’ patients. According to the research conducted by Bhattacharjee et al blunt, abdominal injuries are most usual in males having age category between twenty-one to thirty years. Most patients

having injuries because of automobile mishaps. In our research, the researcher recorded twenty-eight (twenty-eight percent) and thirty-two (thirty-two percent) Duodenum and kidney injured patients respectively. According to the research conducted by Zafudim et al reported huge no of patients injured with vertical collapse and only (5.9%) had abrupt abdominal trauma [15]. With respect to these results, research by Antonacci and Bhattacharjee et al, duodenal wounds constitute nearly (3% to 5%) of abdominal injuries. Crusty abdominal wounds as a consequence of a major blow to epigastrium, mostly because of roads incidents as well as sports ground injuries, constitute for (25%) of the total injuries of the duodenum, presented by Girgin and Chinnery at al [17, 18]. In research conducted by us, The number of patients identified with kidney injuries is thirty-two (thirty-two percent). Category I injury was identified in (15.63%) patients and category II, III, IV and V injuries were found in 31.25%, 25%, 18.75% and 9.38% respectively. Uniform results were presented by Wong et al in his research, eighty-nine cases of category II damages to renal were diagnosed aside with abrupt wounds constituting for 94.4%, 57.3% of category II injuries, category III injuries with 12.4%, 25.8% and 4.5% as injuries of category

IV & V respectively [19]. A huge factor of wounds to the kidney is MVAs along with motorcycles constituting (48.3%) of total injuries to the kidney. In our research, the number of patients diagnosed with injuries to Pancreas was twenty-four percent additional with sixteen percent pancreatic duodenal wounds. Pancreas traumatic wounds happened just after abrupt abdominal injuries or penetration wounds along with the percentage of 3:1. These specific injuries are categorized with extreme bitterness and causality with (45% to 50%) composite percentage as displayed in the literature reappraisal [17, 20]. Damages to pancreatic developed in (3% to 15%) of total abdominal injuries. Distinguished traumatic pancreas injuries are not usual; in (50% to 98%) of the patients, they are linked to other parts wounds, just like kidney, liver or spleen arteries. Because of its retroperitoneal pancreas area, distinguish pancreatic wounds developed in lesser than (5%) of primary abrupt abdominal injury [21].

CONCLUSION:

The common most factor of abrupt abdominal injuries in road accidents, as well as most patients, were identified with injuries of the kidney. This research dominates the requirements for precedence to public health passage to endure via traffic laws as well as fierceness inhibition in Pakistan.

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