Original Research

PANCREATIC INJURIES FOLLOWING ABDOMINAL TRAUMA: DEMOGRAPHICS, IMAGING PATTERNS, AND MANAGEMENT OUTCOMES

Dr. Ramesh S Tatti[1], Dr. Niketan Jambhulkar[2], Dr. Abdul Haque M Quraishi[3], Dr. Sanjay Dakhore[4], Dr. Pankaj Tongse[5], Dr. Sanskruti Akulwar[6], Dr. Gaurav Nighot[7], Dr. Ashlesha Ganorkar[8]

[1,2,3,4,5,6,7,8]Department Of General Surgery and Trauma Care Center, Government Medical College, Nagpur, Maharashtra, India.

ABSTRACT

Introduction: Pancreatic trauma, though uncommon, carries significant morbidity due to its retroperitoneal location and proximity to vital structures. Blunt trauma, particularly road traffic accidents, is the leading cause, with clinical features often nonspecific. Early radiological evaluation is crucial for detecting parenchymal and ductal injuries and guiding management.

Method: A prospective case series was conducted at a tertiary trauma center, including 37 patients with confirmed pancreatic injury. Demographics, mechanism of injury, clinical presentation, radiological findings, and management strategies were recorded. Parenchymal injuries were categorized as contusion, laceration, transection, or gangrene, and ductal involvement as present, suspected, or absent. Management was either conservative or surgical based on injury severity and hemodynamic stability. ICU requirement and postoperative outcomes were assessed. Statistical analysis was performed using chi-square/Fisher's exact tests, with $p < 0.05$ considered significant.

Results: The mean age was 29.9 ± 12.0 years, with male predominance (86.5%). Road traffic accidents were the most frequent mechanism (48.6%). Abdominal pain (100%) and vomiting (89.2%) were common. Parenchymal injury occurred in 89.2%, mainly lacerations (37.8%) and transections (29.7%), while ductal injury was present in 41.7%. ICU admission was significantly associated with ductal injury ($p = 0.037$). Among 13 surgically treated patients, early complications (61.5%) were more common than late complications.

Conclusion: Ductal involvement predicts higher ICU need and postoperative complications. Early radiological diagnosis and risk stratification are essential for optimizing outcomes in pancreatic trauma.

Keywords: Pancreatic Trauma, Parenchymal Injury, Ductal Injury, ICU Admission, Surgical Complications, Risk Stratification.

INTRODUCTION

Pancreatic trauma is a relatively uncommon but clinically significant consequence of abdominal injury, accounting for 0.2–2% of all abdominal traumas.[1] Due to its retroperitoneal location and proximity to major vascular and biliary structures, pancreatic injury often goes unrecognized in the initial assessment, leading to delayed diagnosis and increased morbidity. Blunt abdominal trauma, particularly from road traffic accidents, remains the most frequent mechanism, followed by penetrating injuries such as stab or gunshot wounds.[2]

www.ajmrhs.com
eISSN: 2583-7761

Date of Received: 10-06-2026
Date Acceptance: 19-06-2026
Date of Publication: 18-07-2026

The clinical presentation is often nonspecific, with symptoms such as abdominal pain and vomiting, which overlap with other intra-abdominal injuries. Early clinical signs may be subtle, and routine laboratory investigations are insufficiently sensitive to detect parenchymal or ductal disruptions. Radiological evaluation, especially contrast-enhanced imaging, plays a crucial role in the timely identification of injury patterns, including parenchymal laceration, transection, and associated ductal involvement.[3] The management approach varies widely, ranging from conservative monitoring in hemodynamically stable patients to surgical intervention, particularly in cases involving ductal disruption or associated complications. The presence of peripancreatic fluid collections, pseudocyst formation, and ductal injury significantly influences prognosis, ICU requirement, and the likelihood of postoperative complications. [1,4] Considering the diagnostic challenges and variable outcomes associated with pancreatic injuries, this case series aims to analyze the demographic profile, mechanism of

injury, clinical presentation, radiological patterns, management strategies, and outcomes in patients with pancreatic trauma. By correlating ductal and parenchymal injury status with ICU admission and postoperative complications, this study attempts to identify key predictors of morbidity and assist in optimizing clinical decision-making in pancreatic trauma care.

METHOD

This case series was conducted in the Department of General Surgery at a tertiary care trauma center and included 37 consecutive patients who presented with pancreatic injury following abdominal trauma. Ethical approval was obtained from the Institutional Review Board, and informed consent was obtained from all patients or their legal guardians. Patients of all ages and both genders with confirmed pancreatic injury, whether from blunt or penetrating trauma, were included. Exclusion criteria comprised patients with isolated minor abdominal trauma without pancreatic involvement, incomplete clinical or radiological records, or those lost to follow-up during the initial hospital stay.

Demographic data, including age and gender, as well as the mechanism of injury, were recorded for all patients. Mechanisms of injury were classified as road traffic accidents, falls, blunt trauma to the abdomen or back, cycle handle injuries, gunshot wounds, or self-inflicted stab injuries. Clinical features at presentation, such as abdominal pain, vomiting, distension, guarding, rigidity, and bowel sound status, were documented. All patients underwent contrast-enhanced computed tomography (CT) to assess pancreatic injury. Parenchymal injuries were categorized as contusion, laceration, transection, or gangrene, while ductal involvement was classified as present, suspected, or absent. The presence and extent of peripancreatic fluid collections and pseudocyst formation were also evaluated.

Patients were managed either conservatively or surgically based on hemodynamic stability, extent of parenchymal and ductal injury, and associated complications. The requirement for intensive care unit (ICU) admission and postoperative outcomes, including early and late complications, were recorded. In surgically managed cases, postoperative follow-up focused on complications such as persistent fluid collections and pseudocyst formation.

Data were analyzed using standard statistical methods. Associations between clinical and radiological variables and outcomes, such as ICU requirement and postoperative complications, were assessed using the chi-square test or Fisher's exact test, with a p-value of <0.05 considered statistically significant. This approach allowed for the systematic evaluation of injury patterns, management strategies, and clinical outcomes in patients with pancreatic trauma.

RESULT

As shown in Table 1, a total of 37 patients were evaluated, with a mean age of 29.9 ± 12.0 years, and the 21–30-year age group being the most affected (37.8%). There was a clear male predominance (86.5%), and road traffic accidents (48.6%) emerged as the most common mechanism of pancreatic trauma.

Table 1: Demographic and Mechanism of Injury Profile (N = 37)

Variable	Category	N (%)
Age Group (Years)	<20	7 (18.9%)
	21–30	14 (37.8%)
	31–40	9 (24.3%)
	41–50	6 (16.2%)
	51–60	1 (2.7%)
Mean Age ± SD		29.9 ± 12.0
Gender	Male	32 (86.5%)
	Female	5 (13.5%)
Mechanism Of Injury	Blunt Trauma Abdomen	6 (16.2%)
	Blunt Trauma Back	1 (2.7%)
	Cycle Handle Injury	2 (5.4%)
	Fall	8 (21.6%)
	Gunshot	1 (2.7%)
	Road Traffic Accident	18 (48.6%)
	Self-Inflicted Stab	1 (2.7%)

Table 2: Clinical Presentation on Admission

Clinical Feature	Present N (%)	Absent N (%)
Abdominal Pain	37 (100%)	0 (0%)
Vomiting	33 (89.2%)	4 (10.8%)

Abdominal Distension	21 (56.8%)	16 (43.2%)
Guarding	27 (73.0%)	10 (27.0%)
Rigidity	2 (5.4%)	35 (94.6%)
Bowel Sounds Present	10 (27.0%)	27 (73.0%)

According to Table 2, abdominal pain was universally present (100%), followed by vomiting in 89.2% of cases. Abdominal distension (56.8%) and guarding (73%) were also common findings, while rigidity was rare (5.4%). Notably, abdominal distension showed a significant association with parenchymal injury (p = 0.015), indicating its clinical relevance in predicting deeper pancreatic damage.

Table 3: Radiological Findings and Parenchymal Injury Pattern

Variable	Category	N (%)
Parenchymal Injury	Present	33 (89.2%)
	Absent	4 (10.8%)
Type Of Parenchymal Injury	Contusion	7 (18.9%)
	Laceration	14 (37.8%)
	Transection	11 (29.7%)
	Gangrene	1 (2.7%)
Ductal Status	Present	15 (41.7%)
	Suspected	4 (11.1%)
	Absent	17 (47.2%)
Peripancreatic Fluid	None	18 (48.6%)
	Mild	13 (35.1%)
	Moderate	6 (16.2%)
Pseudocysts	None	31 (83.8%)
	Single	5 (13.5%)
	Multiple	1 (2.7%)

Radiological assessment (Table 3) revealed that parenchymal injury was present in 89.2% of patients, predominantly as lacerations (37.8%) and transections (29.7%). Ductal injury was detected in 41.7%, while peripancreatic fluid collection was noted in nearly half of the patients, mostly of mild grade. Pseudocyst formation was observed in 16.2% of cases.

Table 4: Management and Intensive Care Requirement

Variable	**Category**	**Conservative N (%)**	**Surgical N (%)**	**P-Value**
Parenchymal Injury (Present)	33	20 (60.6%)	13 (39.4%)	0.119
Ductal Injury (Present)	15	7 (46.7%)	8 (53.3%)	0.095
Peripancreatic Fluid (Moderate)	6	4 (66.7%)	2 (33.3%)	0.892
ICU Required (N=16)	Parenchymal Injury Present	16 (100%)	-	0.065
	Ductal Injury Present	10 (66.7%)	-	0.037*

Management trends (Table 4) showed that 60.6% of parenchymal injury cases were treated conservatively, whereas surgery was preferred in ductal injury cases (53.3%). Importantly, ICU admission was significantly higher in patients with ductal injury (p = 0.037), highlighting its prognostic importance.

Table 5: Surgical Outcomes – Early Vs Late Complications (N=13 Operated)

Variable	**Category**	**Early Complications N (%)**	**Late Complications N (%)**
Parenchymal Injury Present	13	8 (61.5%)	5 (38.5%)
Ductal Injury Present	8	5 (62.5%)	3 (37.5%)
Peripancreatic Fluid	4	1 (25.0%)	3 (75.0%)

Mild			
Pseudocyst Formation	1	0 (0.0%)	1 (100.0%)

Among the 13 surgically managed patients, as shown in Table 5, early complications (61.5%) were more frequent than late ones. Pseudocyst formation occurred exclusively as a late complication, indicating delayed sequelae of pancreatic trauma.

Table 6: Summary of Risk Stratification and Outcome

Variable	High Risk n (%)	Moderate Risk n (%)
Parenchymal Injury Present	4 (12.5%)	28 (87.5%)
Ductal Injury Present	16 (57.1%)	12 (42.9%)
ICU Admission Required	16 (43.2%)	-

Risk stratification findings (Table 6) indicated that ductal injury was more frequently associated with higher risk status, and ICU requirement was significantly linked to ductal disruption.

Table 7: Management Approaches in Pancreatic Trauma Cases

Type Of Conservative Management / Surgery Performed	N	%
B/L Drain Insertion	2	5.4%
Conservative Without Any Intervention	21	56.8%
Distal Pancreatectomy With Splenectomy	4	10.8%
Distal Pancreatojejunostomy	3	8.1%
Pancreatic Laceration Repair	3	8.1%
Pigtail Insertion Done (Conservative)	3	8.1%
Total Pancreatectomy	1	2.7%

Table 7 shows that conservative management without intervention was the most common treatment approach, accounting for 56.8% of cases. Surgical procedures were required in selected patients, with distal pancreatectomy with splenectomy being the most frequently performed surgery (10.8%). Other management modalities included distal pancreatojejunostomy, pancreatic laceration repair, and pigtail insertion (8.1% each), while bilateral drain insertion and total pancreatectomy were performed less frequently. This indicates that most pancreatic trauma cases were successfully managed non-operatively.

DISCUSSION

In our case series, the mean age of patients with pancreatic trauma was 29.9 ± 12.0 years, with the majority (37.8%) in the 21–30 years age group, consistent with prior studies indicating that pancreatic trauma predominantly affects younger individuals. Khalayleh et al. (2022) reported a mean age of 24.89 years [5], while Al-Thani et al. (2022) observed 31 years [and Mathiyalagan et al. (2022) reported 28.9 years. [6] Although younger patients predominate, older individuals are not exempt, as shown by Hashimoto et al. (2021) with a median age of 40 years and Morita et al. (2016) with a median age of 49 years in long-term follow-up [7]. Males comprised 86.5% of cases in our cohort, yielding a male-to-female ratio of 6:1, reflecting the strong male predominance reported in other series. [8–11] This likely reflects greater exposure to high-risk behaviors such as road traffic accidents (RTA) and interpersonal violence.

Abdominal pain was universally present, with vomiting (89.2%) and distension (56.8%) also common. Guarding was observed in 73.0% of patients, whereas rigidity was rare (5.4%). These findings align with classic presentations of pancreatic trauma, including upper abdominal pain, leukocytosis. [1] Tachycardia, guarding, and abdominal distension correlated with parenchymal and ductal injuries, highlighting the value of bedside clinical evaluation, although signs may be masked in patients on beta blockers or with comorbid conditions such as hypertension, HIV, or TB. In our setting, serum amylase/lipase was unavailable, though leukocytosis is commonly reported. [1] Absent peristalsis and reduced bowel sounds in most patients (73%) underscore the impact on bowel motility and risk of paralytic ileus.

Radiologically, parenchymal injury was identified in 89.2% of patients, with laceration (37.8%) and transection (29.7%) predominating, followed by contusion (18.9%) and gangrene (2.7%) (table 4). This is higher than reported rates of major parenchymal injury in previous studies (10–25%) [12,13], possibly due to referral bias to a tertiary care center and predominance of high-impact trauma. Main pancreatic duct (MPD) involvement was confirmed in 41.7% and suspected in 11.1%, similar to Ando et al. (2021) at 39%. [14] Peripancreatic fluid

collections were present in 51.4% of cases, predominantly mild (35.1%), consistent with previous reports. [2] Pseudocysts developed in 16.2% (single 13.5%, multiple 2.7%) without any abscess formation, reflecting early detection and conservative management, aligning with literature citing 10–20% pseudocyst incidence. [2] Contusions, lacerations, transections, and gangrene were consistent with reported patterns of blunt and high-grade trauma [12,13,15–17]. Younger patients (<30 years) had a higher proportion of parenchymal injury (p = 0.043), consistent with pediatric and adult trauma literature[16,18,19], whereas ductal injury showed no significant age association (p = 0.657). [14] Peripancreatic fluid collections and pseudocysts also showed no significant age correlation, in line with prior studies
20–24.

Associated injuries were observed in 48.6% of patients, primarily hepatic (13.5%) and splenic (8.1%), whereas 51.4% had isolated pancreatic trauma, higher than most series reporting concomitant injuries in 80–90%. [5,25] Road traffic accidents were the leading cause, followed by blunt trauma and falls, consistent with regional epidemiology; firearm injuries predominate in Western cohorts. [26] Mechanism of injury did not significantly correlate with parenchymal, ductal, or fluid collection patterns, except for pseudocyst formation, which was significantly associated with blunt trauma (p < 0.001). Clinical symptoms such as abdominal distension and guarding correlated significantly with parenchymal and ductal injury (p = 0.015 and p = 0.004, respectively), supporting prior evidence of peritoneal irritation in severe trauma. [27–29]

Risk stratification identified parenchymal injury as moderate risk (87.5%), ductal injury as high risk (57.1%), and peripancreatic fluid collections as high risk (66.7%), corroborating previous studies showing higher complication rates with elevated BISAP or Modified CTSI scores. [29,30] Management was conservative in 64.9% of patients and surgical in 35.1%, with ductal injuries more frequently requiring operative intervention (53.3%) than parenchymal injuries (39.4%), consistent with international guidelines recommending nonoperative management for Grade I–II injuries and surgical intervention for Grades III–V. [15,31] Mean operative time was 288.3 ± 42.0 minutes, slightly higher than literature (214–285 minutes), likely due to associated injuries and intraoperative complexity. [4,15,32] Presence of peripancreatic fluid collections or pseudocysts did not significantly prolong surgery.

Complications such as acute pancreatitis occurred in 18.2% of parenchymal and 26.7% of ductal injuries, while pancreatic fistulas were observed in 3% and 6.7%, respectively, consistent with prior reports highlighting ductal injury as the strongest predictor. [1,16,33] Additional interventions were significantly more common in ductal injury (66.7% vs 23.5%, p = 0.037), confirming that ductal involvement dictates surgical or interventional needs. [15,31] Mortality was higher in patients with ductal (33.3%) and parenchymal injury (21.2%), though statistical significance was limited. Conservative management was associated with significantly lower mortality (8.3%) compared to surgical management (38.5%, p = 0.025), supporting the safety of non-operative strategies in low-grade injuries. [15,34] Though technically challenging, in certain traumatic pancreatic duct disruption cases Endoscopic guided Main Pancreatic duct Stenting has proven to have better outcomes(not done in this study) . Correlation analysis demonstrated that AAST grade, longer operative time, and delayed surgery were significantly associated with mortality and prolonged hospital stay (p = 0.047, p = 0.050, p = 0.011), confirming prior evidence that injury severity and timely management are key predictors of outcome.[16,35]

CONCLUSION

In conclusion, our case series demonstrates that pancreatic trauma predominantly affects young males, with abdominal pain, vomiting, and guarding as common clinical features. Parenchymal and ductal injuries significantly influence the need for surgical intervention, ICU stay, hospital stay, and mortality, while pseudocysts prolong recovery but are largely manageable conservatively. Early diagnosis, structured risk stratification, and timely management contribute to favorable outcomes, with conservative treatment remaining safe for low-grade injuries and surgical intervention reserved for high-grade or ductal injuries, consistent with contemporary literature.

REFERENCES

1. Debi U, Kaur R, Prasad KK, et al. Pancreatic trauma: A concise review. *World Journal of Gastroenterology : WJG* 2013; 19: 9003.
2. Ayoob AR, Lee JT, Herr K, et al. Pancreatic trauma: Imaging review and management update. *Radiographics* 2021; 41: 58–74.
3. Sedai H, Poddar E, Shrestha S, et al. Delayed presentation of isolated ductal rupture of pancreatic head from blunt abdominal trauma managed conservatively: A case report. *Annals of Medicine and Surgery* 2022; 80: 104249.
4. Menahem B, Lim C, Lahat E, et al. Conservative and surgical management of pancreatic trauma in adult patients. *Hepatobiliary Surg Nutr* 2016; 5: 47077–47477.

5. Khalayleh H, Imam A, Cohen-Arazi O, et al. An analysis of 77 cases of pancreatic injuries at a level one trauma center: Outcomes of conservative and surgical treatments. *Ann Hepatobiliary Pancreat Surg* 2022; 26: 190–198.
6. Mathiyalagan A, Subbarayan S, Jose L, et al. Management of pancreatic trauma: a single center experience. *International Surgery Journal* 2022; 9: 1596–1602.
7. Morita T, Takasu O, Sakamoto T, et al. Long-term outcomes of pancreatic function following pancreatic trauma. *Kurume Medical Journal* 2016; 63: 53–60.
8. Scollay JM, Yip VSK, Garden OJ, et al. A population-based study of pancreatic trauma in Scotland. *World J Surg* 2006; 30: 2136–2141.
9. Joos E, de Jong N, Ball CG, et al. Time to operating room matters in modern management of pancreatic injuries: A national review on the management of adult pancreatic injury at Canadian level 1 trauma centers. *Journal of Trauma and Acute Care Surgery* 2021; 90: 434–440.
10. Al Tamimi AS, Kadhm RJ. The incidence and surgical approaches of pancreatic injuries following blunt and penetrating abdominal trauma in al-diwaniyahteaching hospital. *International Journal of Research in Pharmaceutical Sciences* 2020; 11: 3691–3698.
11. Marcel Autran Cesar Machado. Marcel MACHADO | Professor | Hospital Sirio Libanes, São Paulo | Department of Surgery | Research profile - Page 4, https://www.researchgate.net/profile/Marcel-Machado/4 (accessed 7 September 2025).
12. Ankouz A, Elbouhadouti H, Lamrani J, et al. Pancreatic transection due to blunt trauma. *J Emerg Trauma Shock* 2010; 3: 76.
13. Ramzee AF, Bakhsh ZK, Al Jogol H, et al. Trouble in Tiger country: isolated traumatic pancreatic transection – a case report. *J Surg Case Rep*; 2023. Epub ahead of print 1 February 2023. DOI: 10.1093/JSCR/RJAD071.
14. Ando Y, Okano K, Yasumatsu H, et al. Current status and management of pancreatic trauma with main pancreatic duct injury: A multicenter nationwide survey in Japan. *J Hepatobiliary Pancreat Sci* 2021; 28: 183–191.
15. Ho VPMMPNJMBFMMFGM. Pancreatic Injuries. *estern association for the surgery of trauma*; 81.
16. Al-Thani H, Ramzee AF, Al-Hassani A, et al. Traumatic Pancreatic Injury Presentation, Management, and Outcome: An Observational Retrospective Study From a Level 1 Trauma Center. *Front Surg*; 8. Epub ahead of print 28 January 2022. DOI: 10.3389/FSURG.2021.771121/FULL.
17. El-badry AM, Ali MM. Surgical management of traumatic pancreatic injuries and their consequences. *International Surgery Journal* 2020; 7: 3555–3562.
18. Ibrahim A, Wales PW, Aquino MR, et al. CT and MRI findings in pancreatic trauma in children and correlation with outcome. *Pediatr Radiol* 2020; 50: 943–952.
19. Moschetta M, Telegrafo M, Malagnino V, et al. Pancreatic trauma: The role of computed tomography for guiding therapeutic approach. *World J Radiol* 2015; 7: 415.
20. Khan S, Chandran S, Chin J, et al. Drainage of pancreatic fluid collections using a lumen-apposing metal stent with an electrocautery-enhanced delivery system. *Journal of Gastroenterology and Hepatology (Australia)* 2021; 36: 3395–3401.
21. Bhakta D, de Latour R, Khanna L. Management of pancreatic fluid collections. *Transl Gastroenterol Hepatol*; 7. Epub ahead of print 1 April 2022. DOI: 10.21037/TGH-2020-06/COIF).
22. Tan JH, Chin W, Shaikh AL, et al. Pancreatic pseudocyst: Dilemma of its recent management (Review). *Exp Ther Med* 2020; 21: 159.
23. Koo JG, Liau MYQ, Kryvoruchko IA, et al. Pancreatic pseudocyst: The past, the present, and the future. *World J Gastrointest Surg* 2024; 16: 1986.
24. Sutherland I, Ledder O, Crameri J, et al. Pancreatic trauma in children. *Pediatr Surg Int* 2010; 26: 1201–1206.
25. Seong YH, Young CC. Prognostic Determinants in Patients with Traumatic Pancreatic Injuries. *J Korean Med Sci* 2008; 23: 126–130.
26. Braden L, Minas-Alexander R, … AL-TAJ of, et al. Traumatic pancreatic injuries and treatment outcomes: An observational retrospective study from a high-volume tertiary trauma center. *Elsevier*, https://www.sciencedirect.com/science/article/pii/S0002961024006949 (accessed 7 September 2025).
27. Yao J, Zhang S, Zhou F, et al. The

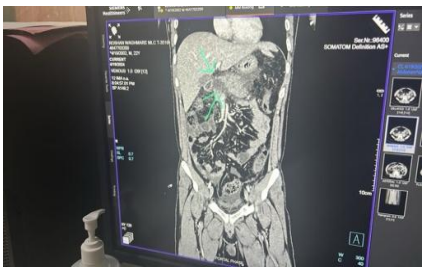
relationship between inflammatory cytokines and in-hospital complications of acute pancreatitis. *Immun Inflamm Dis*; 12. Epub ahead of print 1 February 2024. DOI: 10.1002/IID3.1203,.

28. Xiao N-J, Cui T-T, Liu F, et al. Current status of treatments of pancreatic and peripancreatic collections of acute pancreatitis. *http://www.wjgnet.com/* 2021; 13: 633–644.
29. Wang CF, Tariq A, Chandra S. Acute Pancreatitis. *StatPearls*, https://www.ncbi.nlm.nih.gov/books/NBK482468/ (2025, accessed 6 September 2025).
30. Pujari KK, Naveen K. Risk Stratification and Clinical Outcomes in Gallstone-Related Acute Pancreatitis: A Prospective Observational Analysis from a Tertiary Centre. *Journal of Contemporary Clinical Practice* 2025; 11: 804–809.
31. Kollár D, Molnár TF, Zsoldos P, et al. Diagnosis and management of blunt pancreatic trauma. *sgo-iasgo.comD Kollár, FT Molnár, P Zsoldos, Z Benedek-Tóth, A OláhSurg Gastroenterol Oncol, 2018•sgo-iasgo.com*; 23. Epub ahead of print 2018. DOI: 10.21614/sgo-23-1-5.
32. Kang HJ, Choi SB, Choi SY. Surgical experience and clinical outcome of traumatic pancreatic injury. *Korean J Hepatobiliary Pancreat Surg* 2012; 16: 160.
33. Ansari S El, Taddart S, Bouktib Y, et al. Pancreatic Trauma: A Case Report. *saspublishers.comST Sara El Ansari, Y Bouktib, B Boutakioute, MO Idrissi, NCI El Ganouni, MA El MansouriSAS J Med, 2024•saspublishers.com*. Epub ahead of print 2024. DOI: 10.36347/sasjm.2024.v10i10.015.
34. Singh RP, Mahajan A, Selhi JS, et al. Management and Outcome of Patients with Pancreatic Trauma. *Niger J Surg* 2017; 23: 11.
35. Meijer LL, Vaalavuo Y, Regnér S, et al. Clinical characteristics and long-term outcomes following pancreatic injury – An international multicenter cohort study. *Heliyon* 2023; 9: e17436.

How to cite this article: Dr. Ramesh S Tatti, Dr. Niketan Jambhulkar, Dr. Abdul Haque M Quraishi, Dr. Sanjay Dakhore, Dr. Pankaj Tongse, Dr. Sanskruti Akulwar, Dr. Gaurav Nigho, Dr. Ashlesha Ganorkar, PANCREATIC INJURIES FOLLOWING ABDOMINAL TRAUMA: DEMOGRAPHICS, IMAGING PATTERNS, AND MANAGEMENT OUTCOMES, Asian J. Med. Res. Health Sci., 2026; 4 (2):2227-2236.
Source of Support: Nil, Conflicts of Interest: None declared.

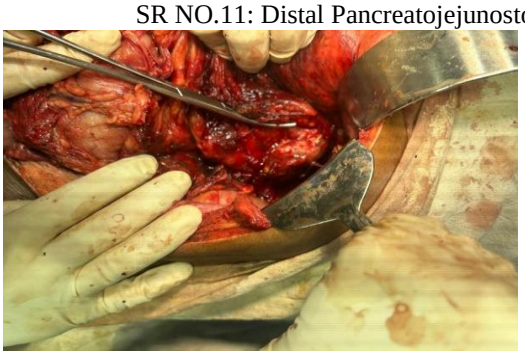
IMPORTANT IMAGES

SR.NO1: B/L Drain Insertion

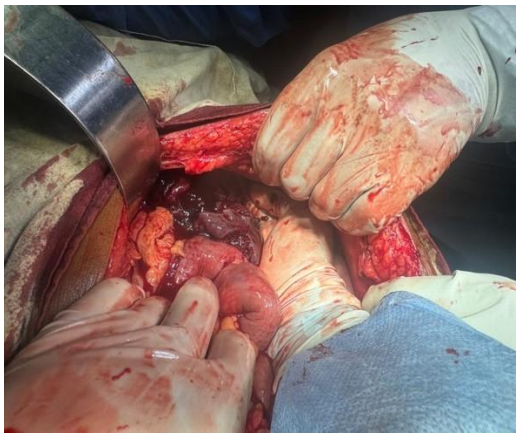



SR NO 3: B/L Drain Insertion

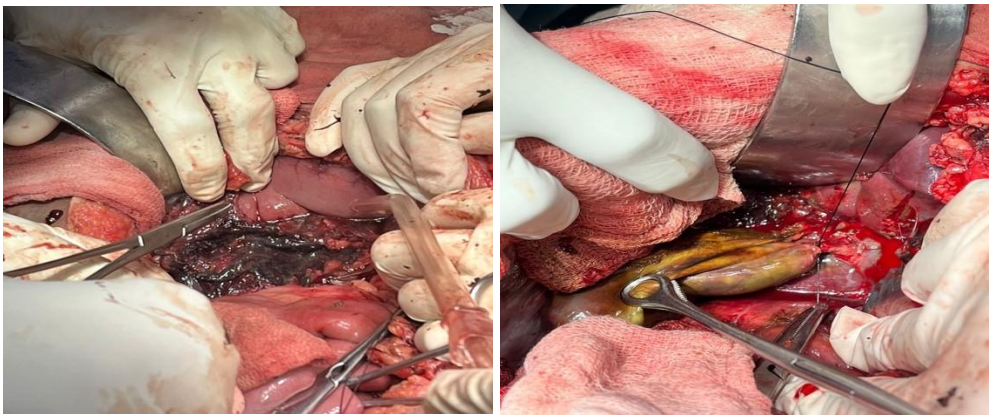

SR NO.11: Distal Pancreatojejunostomy with Feeding Jejunostomy



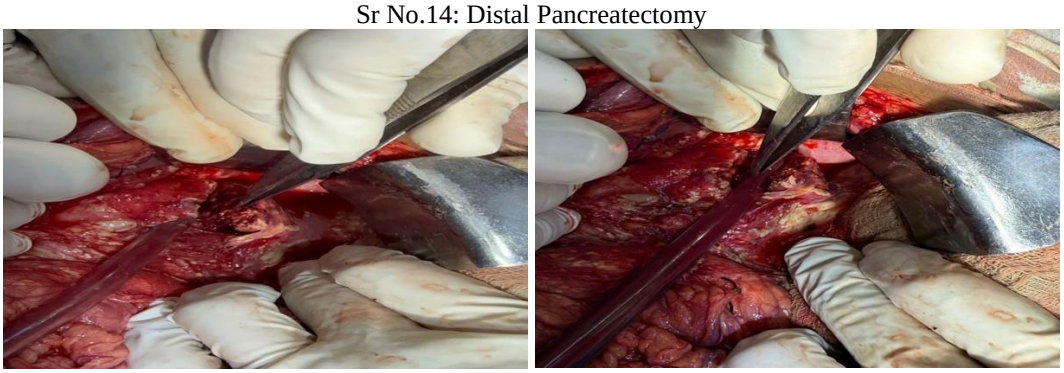

SR NO.12: Distal Pancreatectomy with Spleenectomy



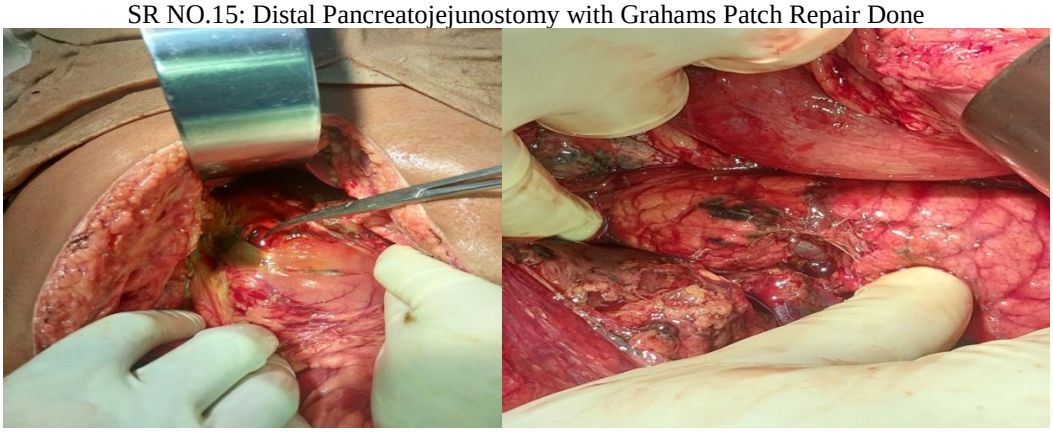

SR NO 13: Total Pancreatectomy with Cholecystectomy with Bowel Resection with Ileostomy with Colostomy Done



Sr No.14: Distal Pancreatectomy



SR NO.15: Distal Pancreatojejunostomy with Grahams Patch Repair Done



Sr No.17: Pigtail Insertion

SR.NO 18: Pancreatic Laceration Repair with Grahams Patch Repair Done