



LDH/AST RATIO AS A PREDICTOR OF NECROSIS IN ACUTE PANCREATITIS TAKING CT SCAN AS GOLD STANDARD

Samiullah Bhatti, Shabbar Changazi, Usman Ismat Butt, Muhammad Umar, Muhammad Waris Farooka, Mahmood Ayyaz
Services Institute of Medical Sciences, Pakistan



Introduction

- Acute pancreatitis is acute inflammation of the pancreas
- Necrosis of pancreas is the most dreadful complication
- CT SCAN is the current Gold standard to diagnose necrosis radiologically
- CT SCAN is still a difficult investigation in resource poor settings
- Lactate dehydrogenase/Aspartate aminotransferase (LDH/AST) ratio has been found to be a useful marker to predict necrosis of pancreas biochemically.
- This study was done to determine the diagnostic accuracy of LDH/AST ratio in detection of necrosis in acute biliary pancreatitis by taking CT SCAN as Gold standard in our population

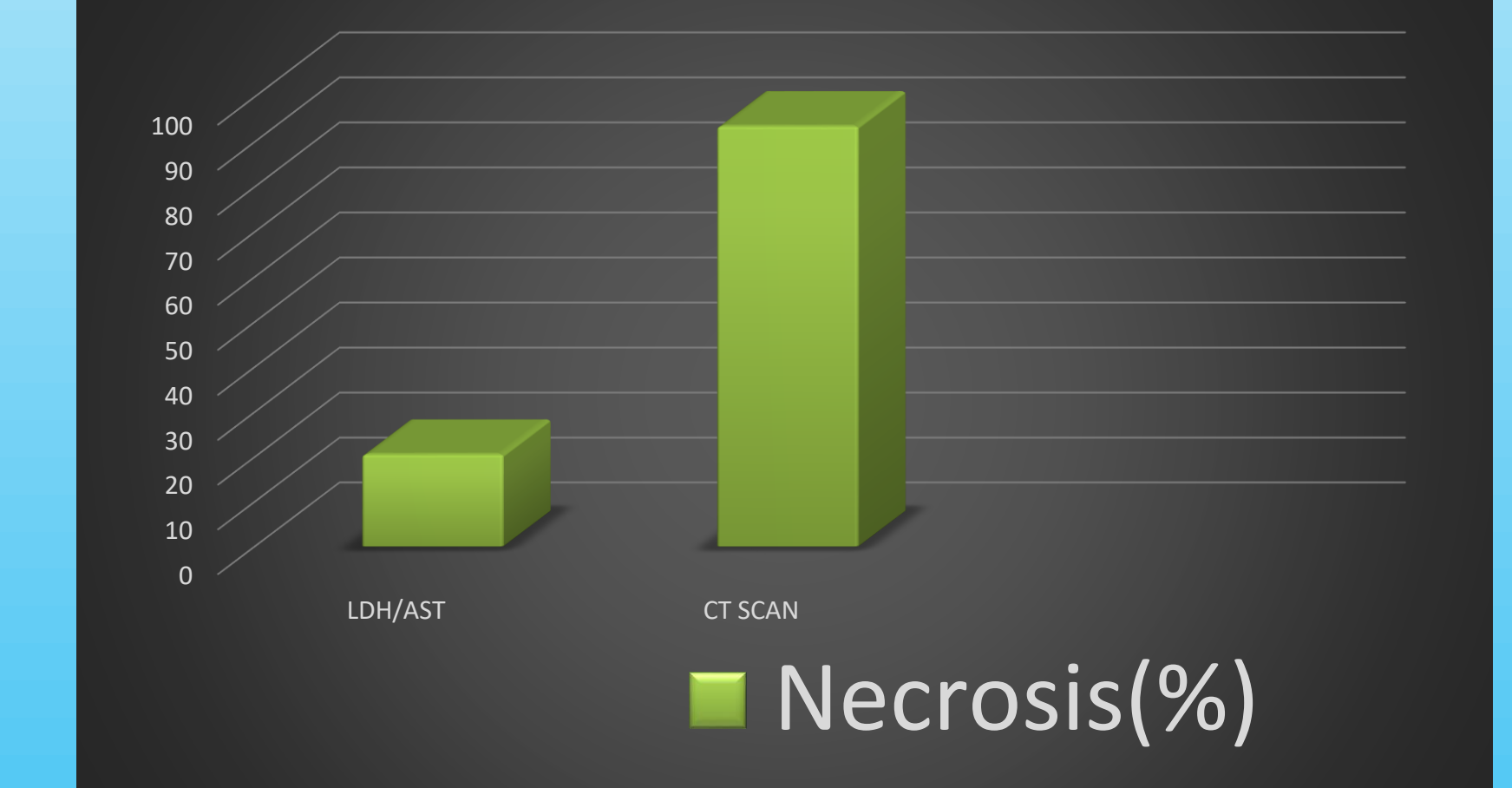
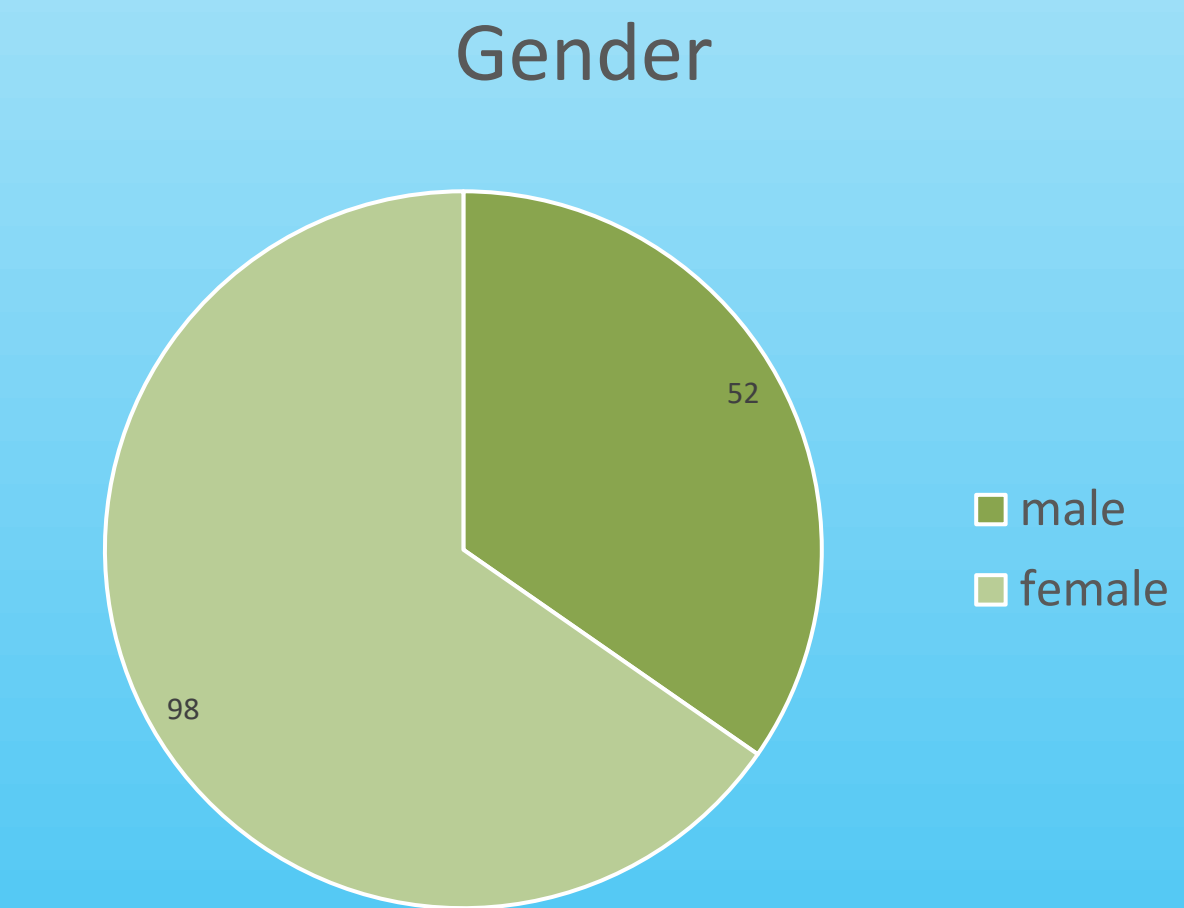
MATERIALS AND METHODS

- This cross sectional study was done in department of Surgery, Services Hospital Lahore.
- 150 patients who gave informed consent and full-filling the inclusion criteria were admitted through the emergency department.
- Serial levels of AST and LDH at 1st, 3rd, 5th and 7th post admission day were done.
- Pancreatic necrosis was labelled if LDH/AST ratio was above 20.
- CT SCAN was done to confirm the findings.
- Primary outcome measure was to detect presence of necrosis as predicted by LDH/AST ratio and CT scan.
- Data was entered and analyzed in SPSS ver 23.0.

RESULTS

- Out of 150 patients 65.3% (98) were females while 34.6% (52) were males.
- Mean age of the patients was 42.57 +/- 5.27 years.
- Out of 150 patients 31 (20.6%) were predicted to have developed pancreatic necrosis on LDH/AST ratio.
- And among them 29 (93.5%) were confirmed to have pancreatic necrosis on CT scan as was our primary outcome measure.
- Agreement between pancreatic necrosis prediction on LDH/AST ratio and CT scan was found to be 93.5% with a kappa coefficient of 0.958 and p-value of 0.001.

Gender	Necrosis on CT Scan	Necrosis on LDH/AST ratio		Total	P-value	Kappa
		present	absent			
Female	Present	14	00	14	0.001	0.927 (CI95%)
	Absent	02	161	163		
	Total	16	161	177		
Male	Present	26	01	27	0.001	0.974 (CI95%)
	Absent	00	66	66		
	Total	26	67	93		



CONCLUSION

- LDH/AST ratio >20 is strongly associated with the development of pancreatic necrosis and can be used as biochemical marker of pancreatic necrosis.

REFERENCES

- Dunphy JE. Pancreas. In: Doherty GM, editor. Current Diagnosis & Treatment: Surgery. 13 ed. United States of America: McGraw-Hill, 2010.
- Dugernier T, Dewaele J, Laterre PF. Current surgical management of acute pancreatitis. Acta Chir Belg., Mar-Apr 2006; 106(2): 165-71
- Isogai M, Hachisuka K, et al. Etiology and pathogenesis of marked elevation of serum transaminase in patients with acute gallstone disease. HPB Surgery, 1991; 4: 95-107

