



Introductions

- AP is an inflammatory disorder of the pancreas which is one of the leading causes of gastrointestinal disorder admissions in the United States and many other countries.
- As incidence of acute pancreatitis increases, so does the demand for effective means of diagnosis.
- According to revised Atlanta classification of 2012, typical abdominal pain in the epigastrium or left upper quadrant along with an elevated lipase level greater than 3-5 times the upper limit of normal is enough to diagnose AP. [1]
- Contrast enhanced abdominal imaging (CECT) should only be obtained in cases of atypical presentation or failure to improve (persistent pain, fever, nausea, unable to tolerate oral intake) in 48-72 hours. [1]
- Availability of CECT has led to overutilization of its use in the diagnosis of AP, which can lead to delay in management, unnecessary radiation, and increased cost burden.
- Here we report a one-year data from a single medical center to assess utilization of CECT abdomen in the emergency department (ED) in the diagnosis of Acute pancreatitis and whether it changed management, length of stay (LOS), or outcomes.

Case Description/Methods

- One year data from 2018 to 2019 for all patients diagnosed with AP in the ED were analyzed. In total, 140 patients, 68 males and 72 females were analyzed. We looked at lipase levels, CECT findings, LOS, and outcome. We used t-test to compare average means.

Results

Table 1. Analysis

Demographic	Etiology of AP	Percentile
Male (N=68)	Alcohol use	37%
Female (N+ 72)	Idiopathic	28%
	Gallstones	22%
	Drug Use	6%
	Hypertriglyceridemia	4%
	Hypercalcemia	1%
	Pancreatic mass	1%

- The study comprised of 140 patients who were diagnosed with AP in the ED. There were 68 males and 72 females with an average age of 49 and an average length of stay of 4 days. The most common etiology causing AP was alcohol abuse (37%), idiopathic (28%), gallstones (22%), followed by 8 cases due to drugs, 6 due to hypertriglyceridemia, 2 due to hypercalcemia, and 1 due to a pancreatic mass. All patients had presented with typical abdominal symptoms of epigastric pain, with and without radiation to the side or back. Average lipase among all patients was 1727 U/L with a median of 530 U/L.
- CECT imaging was performed in 105 patients (75%). Among those who underwent CECT abdomen, 80 cases (76%) had positive finding for AP, while remaining 25 (24%) did not.
- Average lipase values were significantly elevated (2290 U/L vs 1732 U/L) among those who did not undergo CECT abdomen compared to those who did (P-value <0.02).
- There were no statistical significance in both groups as far as management, LOS, hospitalization course, or outcomes.

Discussion

- The purpose of this study was to assess how frequently CECT was used in the initial diagnosis in the ED setting and if it was helpful in changing management.
- Our results indicated that routine use of imaging in the diagnosis of AP is not necessary and has no impact on management and outcome.
- Given pancreatitis is a dynamic process imaging in the early phase of the disease may have a low yield and perhaps disease process may be justified with clinical signs and laboratory findings. [1] [2]
- There are several clinical scoring tools that may be used to aid in assessing the severity of the AP. Ransom scoring system which ultimately predicts severity of organ failure and complications. However, one should be mindful this scoring system can only be used within 48 hours of system onset. Second scoring system is the Acute physiology and chronic health evaluation II (APACHE II) which helps predict outcomes in critical patients. [1] [3]
- Overutilization of CECT can lead to increased radiation exposure and cost burden. Therefore, we recommend judicious use of CECT and recommend against routine utilization in the initial diagnosis of AP.

References

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