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Research Article

Adjunctive Octreotide for Moderate-to-Severe Acute Pancreatitis: A Prospective Comparative Study in Iraqi Patients

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Abstract

Background: Acute pancreatitis (AP) remains a major cause of gastrointestinal hospitalization and can progress to systemic inflammatory response, organ failure, and death. Management is primarily supportive. Octreotide has been proposed to reduce pancreatic exocrine secretion and inflammatory progression, but clinical effectiveness is still controversial, with some studies suggesting it may help reduce complications and improve outcomes in patients with acute pancreatitis. ***Objective***: To investigate the effect of octreotide in the treatment of moderate-to-severe acute pancreatitis in Iraqi patients. ***Methods***: A prospective, pragmatic comparative study was conducted at Baghdad Teaching Hospital, Medical City, Iraq (November 2021–November 2023). Seventy-eight patients with moderate-to-severe AP were included and allocated into a control group receiving conservative management (n=40) and an octreotide group receiving conservative management plus octreotide (0.1 mg subcutaneously every 6 hours for 7 days) (n=38). Outcomes included in-hospital complications, discharge status, mortality, and length of hospital stay. ***Results***: Baseline characteristics were comparable between groups (p>0.05). Complication rates were numerically lower in the octreotide group, including ARDS (7.89% *vs*. 17.5%), septicemia (18.42% *vs*. 32.5%), renal failure (5.26% *vs*. 10.0%), abscess (2.63% *vs*. 7.5%), and pseudocyst (7.89% *vs*. 15.0%), though differences were not statistically significant (p>0.05). Mortality was lower with octreotide (10.5% *vs*. 17.5%). Cure and discharge occurred in 81.57% of octreotide-treated patients versus 65.0% in controls. The mean hospital stay was 12.95±5.74 *vs*. 11.05±5.31 days, respectively (p=0.133). ***Conclusions***: Octreotide showed favorable clinical trends in reducing complications and improving discharge outcomes, but larger randomized trials are needed to confirm efficacy.

Keywords: Acute pancreatitis; Conservative management; Complications; Iraq; Octreotide; Somatostatin analogue.

الأوكتريوتيد المساعد لالتهاب البنكرياس الحاد المتوسط إلى الشديد: دراسة مقارنة مستقبلية لدى المرضى العراقيين

الخلاصة

الخلفية: لا يزال التهاب البنكرياس الحاد سببا رئيسيا للدخول إلى المستشفيات وقد يتطور إلى استجابة التهابية جهازية، وفشل أعضاء، ووفاة. الإدارة داعمة بشكل أساسي. تم اقتراح أن الأوكتريوتايد يقلل من إفراز البنكرياس الخارجي وتطور الالتهابات، لكن فعاليته السريرية لا تزال محل جدل، حيث تشير بعض الدراسات إلى أنه قد يساعد في تقليل المضاعفات وتحسين النتائج لدى مرضى التهاب البنكرياس الحاد. **الهدف**: دراسة تأثير الأوكتريوتيد في علاج التهاب البنكرياس الحاد المتوسط إلى الشديد لدى المرضى العراقيين. **الطرائق**: أجريت دراسة مقارنة مستقبلية في مستشفى بغداد التعليمي، مدينة الطب، العراق (نوفمبر 2021–نوفمبر 2023). تم تضمين ثمانية وسبعين مريضا يعانون من اضطراب البنكرياس المتوسط إلى الشديد وتوزيعهم في مجموعة ضابطة تلقت إدارة محافظة (n=40) ومجموعة أوكتريوتيد تلقت إدارة محافظة بالإضافة إلى أوكتريوتيد (0.1 ملغ تحت الجلد كل 6 ساعات لمدة 7 أيام) (n=38). شملت النتائج المضاعفات داخل المستشفى، وحالة الخروج، والوفيات، ومدة الإقامة في المستشفى. **النتائج**: كانت خصائص الأساس قابلة للمقارنة بين المجموعات (p>0.05). كانت معدلات المضاعفات أقل عدديا في مجموعة الأوكتريوتيد، بما في ذلك متلازمة ARDS (7.89٪ مقابل 17.5٪)، تعفن الدم (18.42٪ مقابل 32.5٪)، فشل كلوي (5.26٪ *مقابل* 10.0٪)، خراج (2.63٪ مقابل 7.5٪)، والكيس الكاذب (7.89٪ مقابل 15.0٪)، رغم أن الفروقات لم تكن ذات دلالة إحصائية (p>0.05). كانت معدلات الوفيات أقل مع الأوكتريوتايد (10.5٪ مقابل 17.5٪). حدث الشفاء والإفراز في 81.57٪ من المرضى الذين عولجوا بالأوكتريوتيدات مقابل 65.0٪ في الضابطين. كان متوسط الإقامة في المستشفى 12.95±5.74 مقابل 11.05±5.31 يوما على التوالي (p=0.133). **الاستنتاجات**: أظهر الأوكتريوتايد تأثيرات سريرية إيجابية في تقليل المضاعفات وتحسين نتائج الخروج، لكن هناك حاجة إلى تجارب عشوائية أكبر لتأكيد الفعالية.

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INTRODUCTION

Acute pancreatitis (AP) is an acute inflammatory disease of the pancreas and persists to be one of the world's leading gastrointestinal diseases for hospital admission [1]. The clinical spectrum varies from mild to self-limited disease to severe disease complicated by SIRS, pancreatic necrosis, persistent organ failure, and death [2]. The Revised Atlanta Classification (2012) offers standardized definitions for severity (mild, moderately severe, and severe), which are based on the presence and duration of organ failure or local/systemic complications; therefore, it allows higher comparability across clinical studies and guides management decisions [3]. The pathogenesis of AP is due to the intrapancreatic presence of premature activation of pancreatic digestive enzymes, resulting in autodigestion and local inflammatory injury by the

pancreas [4]. This early pancreatic injury can start a chain reaction of cytokine-driven SIRS that can evolve further after the peak response to cytokine and result in end-organ damage in severe disease, leading rapidly to endothelial dysfunction and lack of microcirculatory capillary refill, with capillary leak, and multiorgan failure [5]. Gallstones and alcohol are still the most common causes of acute pancreatitis [6], but in the past decade new triggering factors have been recognized, including hypertriglyceridemia, post-endoscopic retrograde cholangiopancreatography (ERCP), metabolic disorders, drugs, and idiopathic cases [7]. Diagnosis is usually made when ≥2 of the following are present: characteristic abdominal pain, elevated pancreatic enzymes, and imaging findings consistent with acute pancreatitis [8]. Despite advances in clinical care, the management of AP remains primarily supportive [9]. International guidance emphasizes early appropriate fluid resuscitation, adequate analgesia, nutritional support (preferably early enteral feeding in suitable patients), and careful monitoring for complications [10]. In biliary AP with cholangitis or persistent obstruction, early ERCP may be necessary [11]. Importantly, routine prophylactic antibiotics are not recommended for severe AP or sterile necrosis because they have not demonstrated consistent benefit; antibiotics are reserved for confirmed infections such as infected necrosis or extrapancreatic infection [12]. These approaches improve outcomes but do not directly target disease-driving mechanisms such as pancreatic exocrine stimulation and sustained inflammatory amplification, leaving an unmet need for adjunctive therapies that may prevent progression and reduce complications [13]. Somatostatin and its synthetic analog octreotide have long been investigated as potential pharmacologic interventions in AP because of their inhibitory effects on pancreatic exocrine secretion and gastrointestinal hormone release [14]. Theoretical benefits include reducing ongoing enzyme-related pancreatic injury and attenuating inflammatory progression, especially when administered early [15]. However, the clinical effectiveness of octreotide remains controversial. In moderate to severe AP, a large randomized, double-blind, multicenter trial concluded that octreotide conferred no therapeutic benefit, raising uncertainty over octreotide's role in standard practice [16]. On pharmacologic interventions in AP, systematic reviews performed likewise concluded that no drug therapy has consistently reduced clinically relevant outcomes like short-term mortality, although heterogeneity in disease severity, timing of administration, and outcome definitions limit interpretation [1,17]. This evidence gap is particularly relevant in real-world settings where disease presentation, baseline severity, and resource availability may vary. In Iraq, AP constitutes an important clinical problem, and outcomes may be influenced by differences in etiological patterns, delayed presentation, and constraints in advanced supportive care in some settings. Therefore, locally generated evidence is required to clarify whether octreotide can provide measurable benefit as an adjunct to standard therapy among Iraqi patients with AP. This study aimed to investigate the effect of octreotide in the treatment of acute pancreatitis in Iraqi patients.

METHODS

Study design and setting

A prospective, open-label, pragmatic comparative clinical study on the effect of octreotide as an add-on to conservative management on the treatment of patients with moderate-to-severe acute pancreatitis. Eligible patients were randomly divided into two parallel groups: 1) patients treated with conservative management alone (the control group), and 2) patients treated with conservative management plus octreotide (the octreotide group). Due to real-world practice considerations, including availability of octreotide and physician prescribing preferences, it would be best classified as a non-randomized prospective comparative cohort study. The study was conducted at Baghdad Teaching Hospital, Medical City, Baghdad, Iraq, over a period from November 2021 to November 2023.

Study population and recruitment

Adult patients admitted to the study center with suspected acute pancreatitis were screened for eligibility. Patients who met the diagnostic and severity criteria and completed the required diagnostic evaluation were enrolled and followed during hospitalization. A total of 78 patients were included in the final analysis.

Inclusion criteria

Patients with a definite diagnosis of acute pancreatitis from a combination of clinical presentations, appropriate laboratory investigations, and imaging assessment were considered for recruitment. Second, only individuals with moderate-to-severe acute pancreatitis were included, and severity was confirmed by imaging, including computed tomography (CT), when possible within the first 72 hours. Diagnostic accuracy and appropriate disease staging for study inclusion required imaging findings consistent with acute pancreatic involvement, specifically, pancreatic inflammation and/or edema as presented in Figure 1.

Exclusion criteria

Mild acute pancreatitis was not included in the study due to its nature as a self-limiting process that does not fit into a therapeutic assessment classification. The exclusion of patients with chronic renal failure can be attributed to the effect of renal function on clinical outcomes and safety of treatment. Pregnant women were also excluded to avoid any potential risk to the fetus as well as the influence of pregnancy on treatment decision-making or the course of acute pancreatitis. Any patient in whom diagnostic confirmation was incomplete was excluded, as well as

any patient for whom essential diagnostic data were missing and were considered essential for eligibility determination, as these would limit the validity and reproducibility of case classification across the study population.

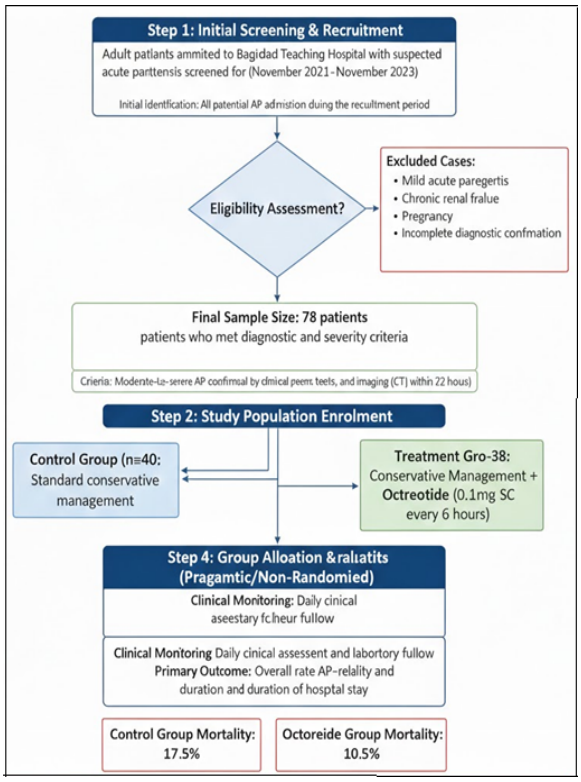

Figure 1: Flowchart of the study.

Diagnostic work-up and severity assessment

All participants received a clinical assessment supported by laboratory and radiological investigations. Diagnosis was based on the usual clinical picture, complemented by supportive diagnostic studies. The imaging modalities, which include techniques like CT (computed tomography), were used as diagnostic and severity assessment aids, with CT done, if possible, within the first 72 hours for disease severity assessment.

Allocation into study groups

After eligibility confirmation, patients were allocated into two groups: the control group, which received conservative management alone, and the octreotide group, which received conservative management plus octreotide. Allocation was performed pragmatically under real clinical practice conditions. The decision to administer octreotide was influenced by the availability of the drug in the hospital and the admitting physician's belief in its effectiveness.

Conservative management protocol

Standard conservative management was provided to all the enrolled patients in both study groups during the hospitalization course. This supportive care was administered in accordance with the routine clinical practice protocol laid out at the study site during the phase of the study and was applied uniformly to provide consistent baseline treatment to all participants. The conservative management included intravenous fluid therapy for sufficient hydration and hemodynamic stabilization, insertion of a nasogastric tube when indicated for gastric decompression, and analgesic therapy to control abdominal pain and provide comfort to the patient. Patients also received proton pump inhibitor therapy as part of gastric protection and upper gastrointestinal supportive care during the acute disease phase and antibiotic therapy when clinically needed.

Octreotide intervention protocol

Patients assigned to the intervention arm received octreotide acetate in addition to standard conservative management. Octreotide was given at a dose of 0.1 mg SC every 6 hours, and treatment continued for 7 days (consecutive, depending on the clinical status of the patient and length of hospital stay). Octreotide ampoules were refrigerated at 2–8°C to maintain drug stability and proper storage (temperature) conditions.

Monitoring and follow-up

All patients were monitored throughout the hospitalization period using daily clinical assessments combined with routine laboratory follow-up to evaluate disease progression, detect complications, and ensure treatment safety. Clinical monitoring was performed on a day-to-day basis according to standard inpatient care practices for acute pancreatitis. Laboratory investigations were conducted as part of regular monitoring and included complete blood count (CBC), renal function tests, liver function tests, and electrolyte measurements, allowing for ongoing assessment of hematologic status, organ function, and metabolic stability during treatment and recovery.

Primary outcome

The study's primary outcome was the development of acute pancreatitis–related complications during a patient's hospitalization. Outcome The composite endpoint was assessed with respect to the overall rate of complications between the control group (conservative management alone) and the octreotide group (conservative management plus octreotide).

Secondary outcomes

We evaluated secondary outcomes to compare the clinical prognosis and treatment impact during their admission among the study groups. Outcomes included death in the hospital and the duration of hospital stay. Moreover, we defined ARDS, sepsis, acute renal failure, pancreatic abscess, and pancreatic pseudocyst as individual complications for separate analyses.

Sample size

Because this study was designed as a prospective pragmatic comparative study, the final sample size was determined by the number of eligible patients admitted during the fixed recruitment period. Therefore, the sample size can be expressed mathematically as

$$n_{total} = \sum_{t=1}^{T} N_{eligible}\,(t)$$

where $N_{eligible}(t)$ represents the number of eligible acute pancreatitis admissions during the month over the study period T. Accordingly, the final analyzed sample consisted of: $n_{total} = 78$ and group allocation resulted in:

n_1 = 40(conservative management) and n_2 = 38(octreotide + conservative)

This sample size was considered sufficient to provide exploratory comparative evidence regarding clinical outcomes (complications, mortality, and length of stay) under real-world Iraqi hospital practice.

Ethical considerations

The Scientific Council of the Iraqi Board of Medical Specialization approved the study protocol. Verbal informed consent was obtained from all participants before inclusion in the study.

Statistical analysis

Statistical analyses were carried out with SPSS software version 17 (IBM, USA) and GraphPad Prism version 7 (GraphPad Software Inc., USA). Continuous variables were expressed by mean±SD, and categorical variables were expressed by numbers and percentages, respectively. The comparisons between groups were accomplished with Student's t-test for continuous variables and chi-square test for categorical variables. ORs (95% CIs) were calculated in studies where the outcome was a dichotomous variable to estimate the strength of association between treatment allocation and the study outcomes. Statistical significance was considered as a p-value < 0.05.

RESULTS

Baseline demographic and clinical characteristics were similar between control (n=40) and octreotide (n= 38) groups (p> 0.05). Age was again slightly higher in the treatment group (44.42 ± 11.22 *vs*. 40.32 ± 10.42 years), but the difference did not reach significance (p= 0.099). Both groups had predominantly female gender and similar sex (p= 0.305) distributions. Gallstones were the most common etiology in both arms (70% *vs*. 76.31%), followed by alcohol- and post-ERCP–related pancreatitis, and no significant variability in etiology was noted (p= 0.832). The proportions of moderate (78% in the intervention arm vs. 71% in the control arm; p= 0.378) and severe cases (22% in the intervention arm *vs*. 29% in the control arm; p= 0.372) were also balanced by arm. The symptom-to-admission time between groups was comparable (2.48 ± 1.26 vs 2.11 ± 1.31 days; p= 0.208). In general, the lack of meaningful differences at baseline creates support for the comparison of outcomes seen in Table 1.

Table 1: Demographic and clinical characteristics of the patients in both groups

Characteristic	Control group (n=40)	Treatment group (n=38)	p-value
Age (year)	40.32±10.42	44.42±11.22	0.099
Gender (F/M)	24/16(60/40)	27/11(71/29)	0.305
Etiology			
Gallstone	28(70)	29(76.31)	0.832
Alcohol	5(12.5)	5(13.15)	
Post ERCP	5(12.5)	3(7.89)	
Drugs	1(2.5)	0(0)	
Unknown	1(2.5)	1(2.63)	
Severity			
Moderate	20(50)	23(53.5)	0.372
Severe	20(50)	15(42.9)	
Duration between onset of symptoms and admission (day)	2.48±1.26	2.11±1.31	0.208

Values are expressed as frequency, percentage, and mean±SD.

The complications of acute pancreatitis were lower in the treatment group as compared to the control group; only 3 patients developed ARDS in the treatment group, while 7 patients were in the control group. Renal failure occurred in only 2 patients in the treatment group, while 4 patients were in the control group. One patient was complicated by an abscess in the treatment group, while 3 in the control group and 3 patients developed a pseudocyst in the treatment group in contrast to 6 patients in the control group. Septicemia developed in 13 patients in the control group, while only 7 patients in the treatment group. Although the number of patients was lower in the treatment group, it was not statistically significant (p> 0.05) (Table 2).

Table 2: The relation of complications to treatment

Complications	Control group (n=40)	Treatment group (n=38)	p-value
ARDS	7(17.5)	3(7.89)	0.312
Septicemia	13(32.5)	7(18.42)	0.198
Renal failure	4(10.0)	2(5.26)	0.676
Abscess	3(7.5)	1(2.63)	0.616
Upper GIT bleeding	0(0)	1(2.63)	0.487
Pseudocyst	6(15.0)	3(7.89)	0.482

Values are expressed as frequency and percentage.

When comparing the risk of developing complications between the two groups, patients in the control group have an increased risk of developing complications (ARDS, septicemia, renal failure, abscess, and pseudocyst) in comparison to the treatment group; however, all these complications were not statistically significant (i.e., modest effect), as illustrated in Table 3. Mortality in the treatment group was 10.5%, while

in the control group it was 17.5%. Patients who were cured and discharged (65%) were in the control group, while 81.57% of patients were cured and discharged in the treatment group.

Table 3: Risk assessment of complications according to type of treatment

Complications	RR	95% CI of RR
ARDS	2.217	0.6771 to 7.491
Septicemia	1.764	0.8165 to 3.934
Renal failure	1.900	0.4312 to 8.557
Abscess	2.850	0.4280 to 19.49
Pseudo cyst	1.333	0.3545 to 5.063

One patient in the treatment group was referred to another hospital. The number of patients who were discharged with complications was 17.5% in the control group, but only 5.26% in the treatment group were discharged with complications. The mean hospital stay was 11.05 days in the control group and 12.95 days in the treatment group. Statistically there was no significant difference in the outcome between the two groups (p> 0.05), as seen in Table 4.

Table 4: The relation of outcome to treatment

Outcome	Control group (n=40)	Treatment group (n=38)	*p*-value
Cured and discharged	26(65.0)	31(81.57)	0.259
Discharged with complication (pseudocyst)	7(17.5)	2(5.26)	0.496
Referred	0(0.0)	1(2.63)	—
Death	7(17.5)	4(10.5)	0.173
Mean hospital stay (day)	11.05±5.31	12.95±5.74	0.133

Values are expressed as frequency, percentage and mean±SD.

Patients who received treatment had a 2-fold increased probability of achieving a cure and discharge compared to those on control; also, patients on treatment had a 50% reduction in the probability of having complications compared to those on control (Table 5).

Table 5: Risk assessment of outcomes

Outcome	OR	95% CI of OR
Cured and discharged	2.154	0.568 – 8.168
Discharged and complications	0.500	0.068 – 3.675
Death	Reference	—

R2 = 0.054, p (model) = 0.821.

DISCUSSION

Octreotide was examined as an adjunct to conservative treatment in Iraqi moderate-to-severe acute pancreatitis patients in this prospective comparative experiment. Compared to conservative therapy, octreotide exposure decreased major systemic and local issues and boosted patient cure rates. Although most between-group differences were not statistically significant, the consistency of trends across numerous clinically important endpoints offers a promising signal that requires careful interpretation and additional confirmation in suitably powered, randomized designs. Comparable baseline groups are essential for relative outcome interpretation. When they arrived, the control and octreotide groups had similar age, sex, etiology, severity categorization, and time between symptoms and hospitalization. Gallstones cause most acute pancreatitis hospitalizations in both groups, mirroring epidemiological trends. Biliary pancreatitis may be clinically relevant due to its distinct inflammatory kinetics, consequences, and procedural requirements compared to alcohol-related disease. Recent evidence-based updates continue to highlight the importance of early etiological characterization and risk stratification to guide monitoring intensity and timely interventions [18,19]. Even after this baseline balancing, the pragmatic nature of allocation to octreotide (its availability/physician optionality) suggests some residual confounding may not be excluded. This is a common real-world comparative cohort limitation, and outcomes may be influenced if very early (unmeasured) clinical severity indicators, such as early organ dysfunction and local necrosis or inflammatory burden, are not fully captured. Thus, while baseline characteristics lend supporting evidence to reasonable comparability, caution in conclusion must be exercised. Octreotide lowered absolute complication rates, notably for systemic and local consequences such as septicemia, ARDS, pseudocyst, and abscess. This pattern is clinically significant. In moderate-to-severe acute pancreatitis, septic complications and respiratory failure lead to ICU admission, prolonged hospitalization, supportive drug escalation, and mortality. Modern clinical studies emphasize that early systemic inflammatory response, gut barrier failure, and secondary infection cause most morbidity in severe illnesses and that limiting early deterioration improves outcomes. [20-22]. The direction of effect in this cohort is biologically plausible. Octreotide is a long-acting somatostatin analogue that suppresses pancreatic exocrine secretion, reduces splanchnic blood flow, and modulates gastrointestinal hormone release. These pharmacological actions could theoretically reduce intrapancreatic enzyme activation and subsequent tissue injury in the early phase of acute pancreatitis. Contemporary mechanistic work underscores that acute pancreatitis is a multi-pathway condition involving immune dysregulation, microcirculatory disturbances, oxidative stress, intestinal permeability changes, and systemic inflammatory amplification [21,23]. Nevertheless, while biologic plausibility is supportive, clinical translation has historically been inconsistent, and modern guidelines have not universally endorsed octreotide as routine therapy. Current evidence increasingly suggests that any potential benefit may be context dependent, influenced by severity of phenotype, timing of administration, and co-interventions. Although confidence intervals were high and crossed unity, effect measures (RR/OR) supported the descriptive trend toward fewer issues in the octreotide group in this cohort. Moderate-sized pragmatic samples with few outcomes exhibit this. Clinical interpretation should emphasize direction and magnitude rather than *p*-values since clinically significant absolute changes might exist with low statistical power. For abscess formation, renal failure, and upper gastrointestinal bleeding, the absolute event

count may be too low. The “true effect” may range from significant benefit to zero effect, highlighting the need for larger confirmatory studies and multivariable baseline severity adjustment. The other endpoints of clinical relevance are discharge status and mortality. Within this cohort, the octreotide arm had more patients sent home as "cured and discharged" and a lower observed mortality rate compared with controls. Although these differences did not attain statistical significance, the direction is in keeping with decreased complication rates, especially with systemic complications, which have been most closely associated with risk of death. Hospital length of stay is also confounded by multiple non-pharmacologic variables, such as local discharge practices and source availability (including imaging or procedures), as well as survivorship bias (e.g., individuals who survive recalcitrant episodes often need prolonged recovery, in comparison to early fatalities among the control arm). In a recent expert review, it was summarized that the hospital outcome of patients with acute pancreatitis is determined, apart from disease biology, by complex systems-level variables [24,25]. A supportive care environment is needed to interpret adjunctive pharmaceutical effects. International recommendations and current evidence syntheses emphasize structured supportive management, early hemodynamic evaluation, customized fluid resuscitation, avoidance of aggressive fluid methods, prompt enteral feeding, and avoidance of needless treatments [24,26]. Early outcomes rely on fluid resuscitation. Recent research emphasizes repairing third-space losses, reducing hypoperfusion, and avoiding excessive resuscitation that may worsen pulmonary and abdominal compartment physiology [27]. Drug effect and fluid strategy variations may reduce ARDS rates, stressing the necessity for consistent supportive regimens in future research [28]. In a systematic review and meta-analysis published in 2025, octreotide in conjunction with ulinastatin improved composite clinical response components and inflammatory parameters in acute pancreatitis, indicating potential advantages in symptom alleviation and biochemical recovery [29]. Likewise, meta-analytic studies addressing combination therapy for severe acute pancreatitis have also assessed post hoc analyses for some outcomes for combination therapy and shown some select outcomes to be improved with combination therapy, though significant heterogeneity and methodological constraints continue to be the greatest limitations to generalizability of the data [30,31]. Most notably, recent evidence-based revisions underline a lack of consistent and reproducible disease-modifying efficacy for pharmacologic interventions across varying populations of acute pancreatitis and reaffirm the primacy of supportive care optimization [19,24]. With this background, the current Iraqi study provides valuable real-world evidence because effect sizes were directionally consistent for reducing complications under pragmatic conditions while the certainty of benefit was still low.

Strengths, limitations, and future perspectives

The present study has several strengths, including a prospective nature and a real-world tertiary hospital setting, offering useful local evidence for the Iraqi clinical practice. Limitations of this study include pragmatic allocation to treatment, small sample size, and no standardized severity score (i.e., BISAP/APACHE II) for risk adjustment. Such constraints may have resulted in broad confidence intervals and an inability to detect statistically significant differences consistent with the direction of effect. Future multicenter studies in Iraq should randomize treatment allocation, optimally standardize supportive care protocols, define the primary endpoint a priori (e.g., persistent organ failure, ICU admission, infected necrosis, or 30-day mortality), and use multivariable modeling to account for and better isolate treatment effects. A better understanding of the increased odds of octreotide use early and in moderate-severe patients, with its potential effects on outcomes, should define whether octreotide actually improves results for specific subgroups of these patients.

Conclusion

This study found consistent, clinically favorable trends. The overall complication rate, including ARDS, septicemia, renal failure, abscess, and pseudocyst formation, was lower by proportions in the octreotide group; more octreotide-treated patients were cured and discharged, and a lower mortality was observed. Nevertheless, most differences were not significant, presumably because of the small sample, few events, and particularly the pragmatic (non-randomized) way of allocation. In summary, the results indicate a possible beneficial effect of octreotide in selected patients, but further efficacy trials with standardized severity scoring and defined endpoints are necessary to prove or refute its effects.

Conflict of interests

The authors declared no conflict of interest.

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Data sharing statement

Supplementary data can be shared with the corresponding author upon reasonable request.

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