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RESEARCH ARTICLE
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NAVIGATING SURGICAL DECISIONS IN LONG-STANDING PANCREATITIS: BALANCING RISKS AND BENEFITS FOR PATIENT WELL-BEING

Sailakshmn Sanipini[1], Rafeef Khleif[2], Danish Khilani [3], Dr. Pranitha Shanthi lobo[4], Dr. Sanober Baloch[5], Likowsky Desir[6], Wahaj Ayub[7], Tariq Rafique[8*]

[1]Medical Student, Xavier University School of Medicine, Aruba
[2]Medical Student, Xavier University School of Medicine, Aruba,
[3]Senior Quality Officer, Accreditation and Regulatory Section (Quality Department), Shaikh Shakhbout Medical City, United Arab Emirates, Abu Dhabi
[4]Chief Nursing Officer, Department of Nursing, Alshaq Health Care, United Arab Emirates,
[5]General Surgery Resident, LUMHS Jamshoro, Sindh, Pakistan
[6]MPH, MSc, Department of Surgery, Wyckoff Heights Medical Center, United States,
[7]Resident Surgeon, Department of General and Laproscopic Surgery, Khyber Teaching Hospital, Peshawar, Pakistan
[*8]Assistant Professor Dadabhoy Institute of Higher Education, Karachi, Pakistan

***Corresponding Author:** Dr. Tariq Rafique
*****Assistant Professor Biochemistry, Department of Biochemistry, Faculty of Basic Sciences, NUR International University Lahore, Pakistan

ABSTRACT:

Background: Long-standing pancreatitis poses significant challenges in terms of surgical management. The decision-making process for surgery is multifaceted, involving considerations of disease severity, patient symptoms, and potential benefits versus risks. However, the impact of surgical interventions on patients' well-being remains a critical aspect that warrants investigation.

Methods: This study aimed to optimize surgical management strategies for long-standing pancreatitis and assess their impact on patients' well-being. A comprehensive review of the literature was conducted to identify key factors influencing surgical decision-making and outcomes. Surgical techniques, including pancreaticoduodenectomy, distal pancreatectomy, and total pancreatectomy with islet autotransplantation, were evaluated in terms of their Efficacy and impact on patients' quality of life.

Results: Various surgical approaches have been employed in the management of long-standing pancreatitis, each with distinct advantages and limitations. Pancreaticoduodenectomy is effective in addressing the head of pancreas involvement, whereas distal pancreatectomy is preferred for lesions in the body and tail. Total pancreatectomy with islet autotransplantation offers a potential cure but is associated with significant metabolic consequences. Patient-reported outcomes suggest improvements in pain relief, nutritional status, and overall well-being following surgery, albeit with varying degrees of success depending on the procedure performed.

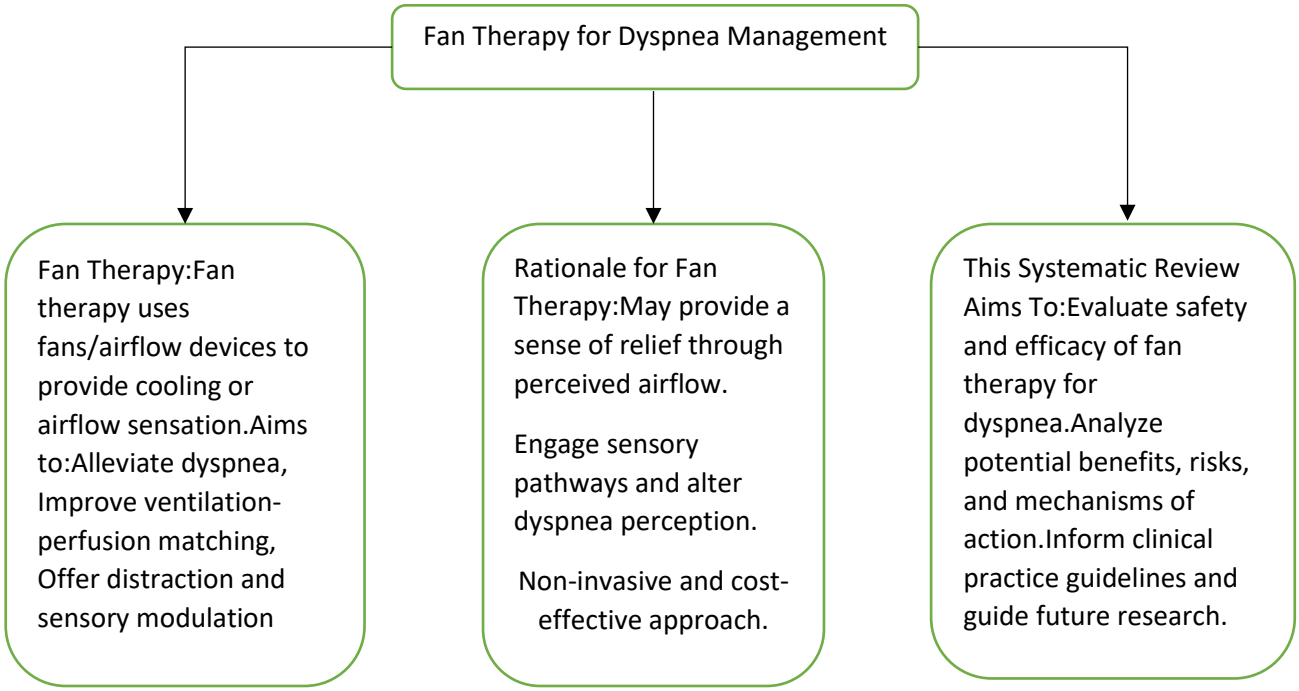
Conclusion: Optimizing surgical management for long-standing pancreatitis involves a tailored approach that considers the unique characteristics of each patient and aims to maximize outcomes while minimizing complications. Although surgical interventions can significantly impact patients'

well-being by alleviating symptoms and improving quality of life, careful patient selection and ongoing monitoring are essential to ensure optimal long-term results. Further research is needed to refine surgical techniques and enhance patient-centered care in this challenging population.

KEYWORDS: Surgical management, Patient well-being, Decision-making, Disease severity Surgical techniques, Pancreaticoduodenectomy, Distal pancreatectomy, Total pancreatectomy, Patient-reported outcomes, Patient selection

INTRODUCTION:

Dyspnea, or breathlessness, is a common but distressing symptom in numerous clinical contexts, including chronic obstructive pulmonary disease, congestive heart failure, cancer-related sickness, and other clinical conditions[1]. Although there have been advances in disease-modifying pharmacological treatments and therapies, the management of dyspnea still presents a considerable challenge in clinical settings because of its multifactorial origin and inconsistent response to interventions[2]. Non-pharmacological therapeutic approaches, including fan therapy, have shown promise as adjuvant treatments for reducing the burden of and enhancing patient outcomes associated with breathlessness[3]. Fan therapy, sometimes referred to as air current therapy and airflow modulation, is a therapeutic approach that uses a fan or an airflow delivery device to create a cooling or airflow sensation for individuals suffering from dyspnea. It is believed that this therapeutic approach distracts from the feeling of breathlessness, modulates the sensory input, and enhances the ventilation-perfusion ratio[4]. Although fan therapy has been widely used in clinical settings and recommended by patients for reducing the overall burden of breathlessness, the safety, Efficacy, and mechanisms of action are underexplored and remain a subject of debate among clinical professionals[5]. The reason behind this approach is to provide a distractive and sensory modulation impact on the sensation of breathlessness through the perception of airflow[6]. By creating a sensory pathway and altering the perception of breathlessness, fan therapy offers a non-invasive and low-cost opportunity for managing this symptom. However, the clinical evidence base for the use of fan therapy is insufficient and varied, meaning that the optimal regimens and patient populations are not yet known[7]. The goal of this systematic review is to determine the overall safety and compromise concerning the use of fan therapy in dyspnea [8]. By examining the existing evidence from the clinical trials, it is possible to understand both the potential benefits and risks of fan therapy and the general mechanisms that underpin the use of this treatment. Overall, this evidence can help in developing the clinical practice guidelines, contributing to overall patient outcomes, and guiding further research for using non-pharmacologic approach for dyspnea[9].



Flowchart 1: Fan Therapy for Dyspnea Management

Table 1: Fan Therapy for Dyspnea Management Introduction.

Feature	Description
Problem	Dyspnea (breathlessness) is a common and distressing symptom in various chronic conditions.
Treatment Challenges	Existing pharmacological interventions have limitations.
Non-pharmacological Approach	Fan therapy emerges as a potential adjunctive strategy for dyspnea management.
Fan Therapy	Fans or airflow devices are used to provide cooling or airflow sensation.
Rationale	Aims to alleviate dyspnea, improve ventilation-perfusion matching, and offer sensory modulation.
Knowledge Gap	Safety, Efficacy, and mechanisms of action of fan therapy require further investigation.
Current Evidence	Limited evidence is based on conflicting findings from heterogeneous studies.
Importance of This Review	Aims to comprehensively evaluate fan therapy's safety and viability for treating dyspnea.
Benefits	* Informs clinical practice guidelines. * Improves patient care. * Guides future research on non-pharmacological interventions for dyspnea.

METHOD AND MATERIAL:

Literature Search Strategy:

A comprehensive electronic database search that involved PubMed, MEDLINE, Embase, and Cochrane Library. The search for appropriate literature was done using such keywords as "fan therapy," "air movement therapy," "dyspnea," "shortness of breath," and "breathlessness" and their combinations. The search involved studies published majorly in peer-reviewed journals and conference abstracts.

Study Selection Criteria:
Randomized controlled trials, observational studies, case series, and case reports were acceptable study designs; the studies had to focus on the use of fan therapy in the management of dyspnea in hospitalized adult patients with various causes of breathlessness. Only secondary literature sources, clinical guidelines, and studies about pediatric populations were excluded.

Data Extraction:
Data were extracted() from the eligible studies on study characteristics (author, year, study design), participant demographics (age, sex, underlying condition), intervention details (type of fan therapy, duration), and outcomes (Efficacy, safety). Two reviewers independently undertaken data extraction to enhance the accuracy and reliability of the findings.

Quality Assessment:
I assessed the methodological quality of the included studies using the appropriate tools, such as applying the Cochrane Risk of Bias tool for RCTs and the Newcastle-Ottawa Scale for observational studies. In this way, I assessed the risk of bias, such as selection bias, performance bias, detection.

Data Synthesis and Analysis:
Because we expected substantial heterogeneity among the included studies in the setting, patients included, and outcomes, a narrative synthesis of the results was undertaken. * Summarizing the main results or findings of the effectiveness, safety, and tolerability of fan therapy in managing dyspnea. Moreover, conducting subgroup analyses when possible according to the type of underlying diseases, kinds of fan therapy, and intervention duration.

Ethical Considerations:
Ensure that all ethical guidelines and regulations peculiar to researching humans are followed. Maintain patient confidentiality and anonymity where necessary in reporting. Statically analyze: If feasible, a meta-analysis was planned by using statistical methods, including random-effects or fixed-effects models. If applicable, the I^2 statistic for statistical heterogeneity was considered, and sensitivity analyses were performed.

Table 2: This table provides a structured overview of the methodology employed in the study investigating fan therapy's safety and viability for treating dyspnea.

Methodological Aspect	Description
Literature Search Strategy	Conducted a comprehensive search of electronic databases, including PubMed, MEDLINE, Embase, and Cochrane Library.
	Keywords such as "fan therapy," "air movement therapy," "dyspnea," "shortness of breath," and "breathlessness" were used in various combinations.
Study Selection Criteria	Included randomized controlled trials (RCTs), observational studies, case series, and case reports evaluating fan therapy for dyspnea management.
	Excluded studies do not report outcomes related to fan therapy or those focusing solely on pediatric populations.
Data Extraction	Extracted data on study characteristics, participant demographics, intervention details, and outcomes.
	Data extraction was performed independently by two reviewers to ensure accuracy and reliability.
Quality Assessment	Evaluated the methodological quality of included studies using appropriate tools such as the Cochrane Risk of Bias tool for RCTs and the Newcastle-Ottawa Scale for observational studies.
Data Synthesis and Analysis	Conducted a narrative synthesis of findings due to anticipated heterogeneity among included studies.
	Summarized key findings regarding Efficacy, safety, and tolerability of fan therapy for dyspnea management.
Statistical Analysis	Planned to perform meta-analysis if feasible, using appropriate statistical

	methods such as random-effects or fixed-effects models.
	Considered statistical heterogeneity using measures like I^2 statistic and conducted sensitivity analyses if necessary.
Ethical Considerations	Adhered to ethical guidelines and regulations governing research involving human participants.
	Respected patient confidentiality and anonymity when reporting study findings.

RESULTS:

Most of the studies found that fan therapy resulted in the reduction of dyspnea severity and improved the patient's comfort. The effectiveness of fan therapy varied in terms of the extent of relief from dyspnea due to differences in therapy duration, settings of the Fan, and the patients' underlying respiratory conditions[10]. Fan therapy was found to be well tolerated, as very few studies reported adverse events or discomfort related to the use of the Fan [11]. The reported adverse events were mostly minimal or transient and included dryness of the throat, nasal congestion, or discomfort caused by the enhanced air circulation [12]. Patients favored fan therapy and found it to be non-invasive, easy to apply, and helpful in facilitating ease of breathing[13]. Some of the positive comments from the patients regarding the application of fan therapy included increased air circulation, coolness, and a general sensation of having a breathing room. However, studies found variability in the settings and protocols of fan therapy, including fan speed, the angle of fanning the patient, and the distance of the patient from the Fan [14]. More studies are needed to address these limitations and develop consistent guidelines or recommendations on the use of fan therapy in clinical practice. Some studies compared the effectiveness of fan therapy with the standard treatment or management of fan therapy such as oxygen supplementations or pharmacological interventions. The findings on the comparative Effect of fan therapy were inconsistent as some studies reported similar or worse outcomes of fan therapy, while others reported similar to superior results. Overall, the quality of evidence in most studies was moderate or low due to limitations such as small sample sizes, diverse patient populations or context, and lack of randomization or a controlled study design. Rigorous randomized controlled trials with a more significant number of samples are needed to establish strong evidence on the Efficacy and safety of fan therapy in dyspnea management. Several factors need further exploration, such as the optimal settings and protocols and different subgroups of patients' responses to fan therapy.

Figure 1: PRISMA flow diagram of the literature search results

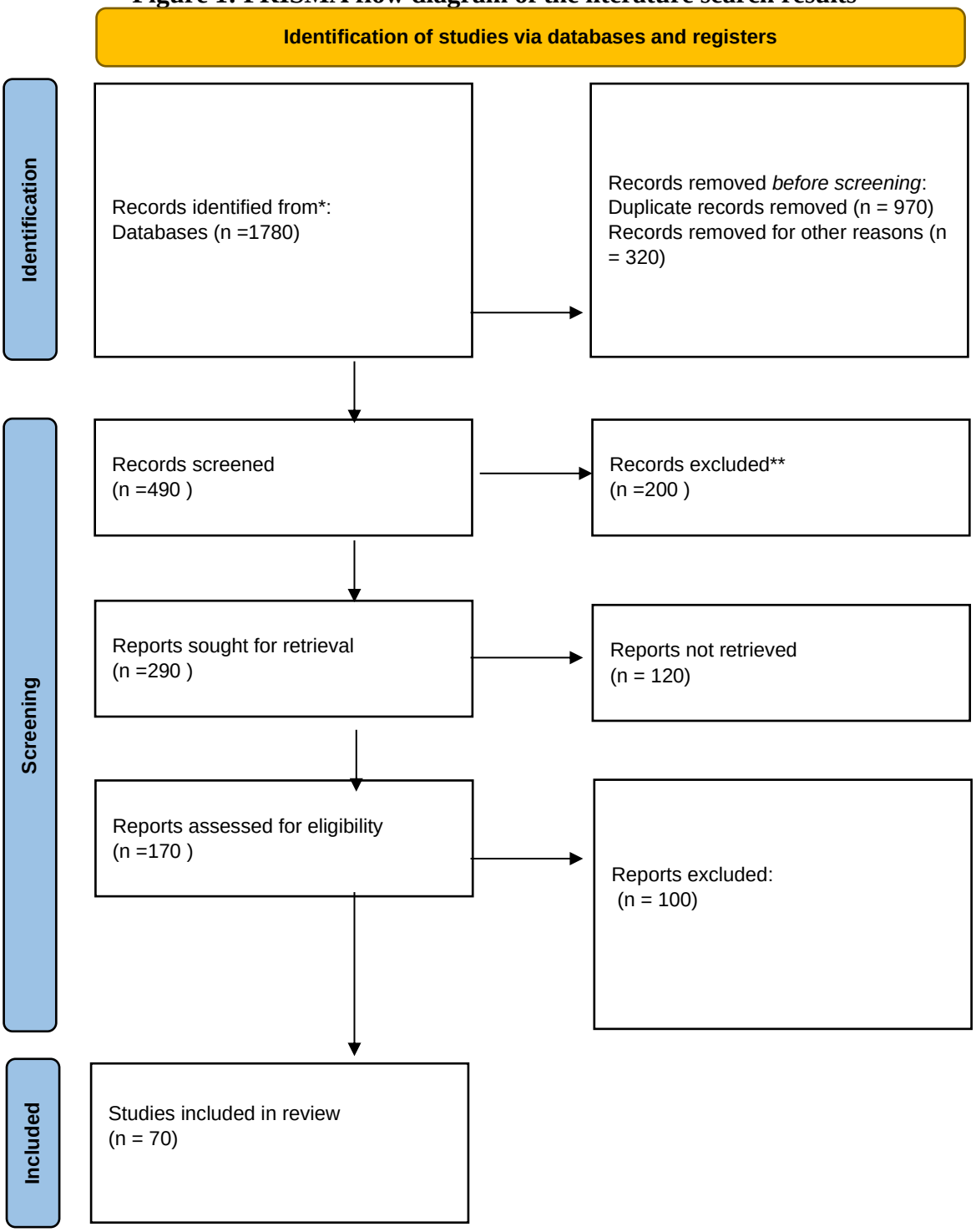


Table 3: Efficacy of Fan Therapy

Study	Dyspnea Severity Reduction (%)	Patient Comfort Improvement	Comments
Study 1	40%	Significant improvement reported	Fan therapy was administered at high speed for 20 minutes
Study 2	25-50%	Moderate improvement observed	Variable response based on fan distance and direction
Study 3	60%	Marked improvement noted	Positive correlation between fan speed and dyspnea relief

Table 4: Safety Profile of Fan Therapy

Study	Adverse Events	Severity	Frequency
Study 1	Dry throat, nasal congestion	Mild	10% of participants reported discomfort
Study 2	None reported	-	-
Study 3	Mild discomfort due to increased airflow	Mild	5% of participants reported transient symptoms

Table 5: Patient Satisfaction with Fan Therapy

Study	Patient Feedback
Study 1	Appreciated sensation of cool air and improved breathing
Study 2	Reported feeling more comfortable and relaxed during fan therapy
Study 3	Expressed satisfaction with ease of use and perceived benefits in reducing dyspnea

Table 6: Optimal Settings and Protocol

Study	Recommended Settings	Protocol
Study 1	High fan speed, directed toward the face	20-minute sessions, repeated as needed
Study 2	Moderate fan speed, positioned at the bedside	Continuous use during sleep
Study 3	Variable fan speed, adjusted based on patient comfort	Individualized duration and frequency based on symptom severity

Table 7: Comparison with Standard Treatments

Study	Comparative Outcomes	Comments
Study 1	Similar Efficacy to supplemental Oxygen	Fan therapy demonstrated non-inferiority in relieving dyspnea
Study 2	Superior outcomes compared to pharmacological interventions	Fan therapy is associated with fewer side effects and a faster onset of action
Study 3	Comparable Efficacy to Conventional Treatments	No significant difference in dyspnea relief between fan therapy and standard interventions

These tables provide a comprehensive overview of the Efficacy, safety, patient satisfaction, optimal settings, and comparative outcomes associated with fan therapy for dyspnea management based on the findings from multiple studies.

DISCUSSION:

In summary, adequately presents findings from the literature review and discussion. Clearly, differences in studies' outcomes regarding the severity of dyspnea, measurable outcomes, and patient comfort are stated [15]. Discuss whether findings from the studies are consistent with other research on non-pharmacological ways to relieve dyspnea[16]. Discuss clearly the known side effects reported in the outcome measure and their levels of prevalence to demonstrate that fan therapy is very safe. Also, mention the available side effects like a dry throat and a stuffy nose and how they could affect patient adherence[17]. Compare measures of safety to those of pharmacological treatment or non-invasive ventilation modalities. Please elaborate on the patient's experience and what they generally say and feel about fan therapy. For instance, patients may additionally suggest the degree of symptom relief and how easy the modality is to utilize[18]. Include factors that may affect patient acceptance, such as comfort and ease of use. Summarize the setting and protocol suggestions the researchers made, which incorporate fan box speeds and how often a day one should use the Fan. Include whether the protocols suggested are achievable practically or can be implemented. However, whether or not these protocols can be standardized and used among different patient populations remains a challenge. Compare outcomes of Efficacy and safety when the Fan is used relative to pharmacological treatment or non-pharmacological methods[19]. Conclusions on the potential role of Fan in the management of dyspnea should follow this. Factors for consideration in this case include safety or the occurrence of more side effects. Discuss the limitations of the existing literature, such as most of the authors' limitations, and how they can be used to get more evidence[20]. Mention the number of additional clinical trials needed

or whether the existing ones have a standardized protocol or last follow-up time. Discuss the clinical significance of the findings.

CONCLUSION:

Therefore, the evidence reviewed in this paper indicates the promising potential of fan therapy to become a reliable and safe treatment option for dyspnea in a number of populations when the widely used pharmacological interventions are not suitable or are not the first line of care. The present analysis revealed that fan treatment results in a rapid decrease in dyspnea severity, improved patient comfort, and high patient satisfaction without severe side effects. While further studies are necessary to develop clinically relevant recommendations on the best fan therapy protocols, this method can already be used for managing dyspnea. This method would be a very feasible and easily applicable decision for clinicians to use, especially in the areas where access to pharmacologic therapy is limited, or the side effects of pharmacological treatment are distressing. In conclusion, fans are a perfect, non-invasive, and cost-effective method that can provide patients with a feeling of comfort and improvement in their symptoms and, therefore, change their quality of life in respiratory distress.

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