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Abstract

Introduction: Refractory pleural effusion (RPE) is a serious postoperative complication of cardiac surgery that often persists despite conventional chest tube drainage. Platelet-rich plasma fibrin glue (PRP-FG), a biologically active sealant with hemostatic and regenerative properties, has previously shown efficacy in reducing morbidity in postoperative chylothorax and pneumothorax. This clinical trial aimed to evaluate the safety and therapeutic efficacy of intrapleural PRP-FG in patients with RPE unresponsive to standard thoracostomy management.

Case Presentation: In this pilot clinical trial, 19 patients with unilateral or bilateral RPE resistant to standard therapy were treated with intrapleural PRP-FG. Treatment success was defined as pleural drainage of <50 mL/day for two consecutive days within one week post-intervention, accompanied by symptomatic improvement.

The mean age was 43.6 ± 19.6 years; 52.6% of patients had undergone coronary artery bypass grafting (CABG), and 36.8% had undergone congenital cardiac surgery. PRP-FG administration led to a significant reduction in effusion volume (624.2 ± 275.0 mL to 25.0 ± 20.1 mL; mean difference 599.2 mL, $p < 0.001$; Cohen's $d = 2.29$). Five patients (26.3%) required a second application, and three (15.8%) required a third for complete resolution. No major adverse events or recurrence were observed during the six-month follow-up; minor, self-limited effects included pleuritic pain and transient dyspnea. One patient with uncontrolled diabetes died from a sternal wound infection unrelated to PRP-FG.

Conclusion: Intrapleural PRP-FG appears to be a safe, effective, and minimally invasive therapy for RPE following cardiac surgery. These promising findings warrant confirmation in larger multicenter studies with longer follow-up to establish its long-term efficacy and clinical applicability.

Keywords: Pleural effusion; Cardiac surgery; Platelet-rich plasma; Fibrin glue; Coronary artery bypass grafting; Cardiology; Surgery. **The Keywords should be Mesh**

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Introduction should clearly state the problem, introduce relevant literature, note any controversies, and present the aim or hypothesis in the last paragraph; insert reference format using Endnote based on **Vancouver** style. **References should be numeric and in parenthesis (1).**

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3. Discussion

Discuss the results and how they can be interpreted in perspective of previous studies. This section may contain: Statement of principal findings, Strengths and weaknesses of the study, Strengths and weaknesses in relation to other studies, discussing important differences in results and recommendation for future research.

Acknowledgments

All logistic, financial, and technical assistance along with the nature of the support should be noted. You can thank the institution, laboratory, clinic, organizational affiliation, and/or those who contributed to the research. You may thank assistance with the patients, cells, supplies, animals, processes, data provision, referrals, and/or samples.

Financial resources should also be included in Acknowledgments. Full or partial investment and the information associated with the grant received, if applicable, need to be specified.

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Author's contributions

Please mention the contributor role of each author on this parts: Conceptualization, Methodology, Software, Validation, Formal Analysis, Investigation, Resources, Data Curation, Writing – Original Draft Preparation, Writing – Review & Editing, Visualization, Supervision, Project Administration, and Funding Acquisition.

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6. References

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1. Jemal A, Siegel R, Xu J, Ward E. Cancer statistics, 2010. CA: a cancer journal for clinicians. 2010 Sep;60(5):277-300.([DOI:10.3322/caac.20073](https://doi.org/10.3322/caac.20073))
2. Steelman ZA, Ho DS, Chu KK, Wax A. Light-scattering methods for tissue diagnosis. Optica. 2019 Apr 12;6(4):479-89.([LINK](#))
3. Wang J, Xu Y, Boppart SA. Review of optical coherence tomography in oncology. Journal of biomedical optics. 2017 Dec 1;22(12):121711.([PMID](#).)

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