



Thoracic Transplantation: A Comprehensive Review

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Abstract

End-stage heart and respiratory failure can now be treated with heart and lung transplants. The International Society for Heart and Lung Transplantation (ISHLT)'s Registry states that heart and lung transplant recipients' survival and quality of life have improved as a result of numerous recent advancements. In the Russian Federation,

and lung transplantation are post-transplant complications like acute graft rejection and nosocomial infections. One

immunosuppressive treatment. The early detection of signs of pathological conditions in transplant is actively being developed using minimally invasive laboratory technologies. However, the multifactorial nature of complications prevents noninvasive diagnosis from being resolved quickly. With this, the quest for new biomarkers of joint harm with demonstrated viability which can decrease the recurrence of obstructive intercessions is very applicable. Recently, biological agents that can be used as indicators of the risk of adverse events associated with processes that lead to graft injury and dysfunction have been the subject of research. It is common knowledge that non-coding microRNAs, which are regulatory molecules with a length of 18 to 25 nucleotides, play a role in the regulation of gene expression, metabolic disorders, autoimmune diseases, and carcinogenesis. In addition to contributing to

for diagnosis and target therapy of post-transplant complications.

Cardiovascular hypoxia, post-ischemic cardiac remodeling, and right ventricular hypertrophy and respiratory MiR-424. Additionally, miR-424 has the potential to suppress immune function and is involved in the regulation of

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respective transfer, for certain special cases [8].

I

The indications for thoracic transplantation depend on the specific organ involved. Heart transplantation is indicated in patients with end-stage heart failure refractory to medical management. Lung transplantation is indicated in patients with end-stage lung disease, such as chronic obstructive pulmonary disease (COPD), idiopathic pulmonary fibrosis (IPF), cystic fibrosis (CF), and pulmonary hypertension (PH). Heart-lung transplantation is indicated in patients with end-stage disease of both organs [9].

E P

The evaluation process for thoracic transplantation involves a comprehensive assessment of the patient's medical history, physical examination, laboratory tests, imaging studies, and psychosocial evaluation. The evaluation process aims to identify potential contraindications, such as active infections, malignancy, severe liver or kidney disease, and psychosocial issues that may affect the patient's ability to comply with post-transplant care. The evaluation process also helps to determine the patient's candidacy for transplantation based on factors such as age, comorbidities, and the severity of the underlying disease [10].

S

The surgical technique for thoracic transplantation varies depending on the specific organ involved. Heart transplantation involves harvesting the donor heart and implanting it into the recipient's chest, connecting the new heart's blood vessels to the recipient's blood vessels and connecting the donor's heart valves to the recipient's native valves. In contrast, lung transplantation involves removing the native lungs and implanting the donor lungs, connecting the donor's bronchi to the recipient's trachea and the donor's pulmonary arteries and veins to the recipient's pulmonary vessels. Heart-lung transplantation involves removing the native heart and lungs and implanting the donor heart and lungs, connecting the donor's blood vessels, and bronchi to the recipient's blood vessels and trachea [11].

objective is to identify risk factors for postoperative TEA placement in lung transplant patients. The optional point of this study is to look at results between lung transplantation patients who got postoperative TEA situation and the people who didn't.

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