Heart biopsy in heart transplant patients – what and how?

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A heart biopsy is a diagnostic method often used to monitor patients after heart transplantation. The goal of the biopsy is to detect signs of transplant rejection and assess any other potential complications, such as infections or heart muscle diseases. A heart biopsy involves taking small samples of heart muscle tissue for microscopic analysis. This method allows doctors to identify early signs of transplant rejection, which is crucial for timely treatment and preserving the function of the transplanted heart. The procedure can be performed in several ways, with the most common method involving the insertion of a catheter through a vein in the neck (jugular vein), which is then guided to the right atrium of the heart. Through the catheter, a bioptome - a small device used to take tissue samples - is inserted into the heart. The procedure is minimally invasive, and patients typically experience mild discomfort but not pain. There is also the option of a femoral approach, where the catheter is inserted through the groin vein. Although biopsies are more frequently performed during the first few months after transplantation, when the risk of rejection is highest, they are conducted less often later on but remain an important tool for long-term patient monitoring. Histological analysis of the samples taken during the biopsy allows for the classification of rejection levels according to internationally recognized criteria, such as the International Society for Heart and Lung Transplantation guidelines.[1] Based on biopsy findings, doctors can adjust therapy to reduce the risk of rejection and damage to the transplanted heart. Although heart biopsy is a relatively safe procedure, complications such as bleeding, perforation of the heart wall and arrhythmias can occur. However, these complications are rare when the procedure is performed by experienced physicians. Heart biopsy is a crucial tool in post-transplant monitoring, enabling the early detection of transplant rejection and therapy adjustment. The procedure is minimally invasive, and its significance in preventing complications makes it a standard practice in transplant medicine.

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LITERATURE

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