

Refinement of tissue diagnostics in the transplant program

Abstract

The thesis describes tissue diagnostics of organ transplants of the donor as well as recipient. In case of donated organs (grafts), it aims to improve the provisional scoring system of graft rejection after uterine transplantation. Using histopathological methods including immunohistochemistry, it compares lymphocytic population classified in the scoring system with histopathological findings within the resected uteri of women who underwent hysterectomy for benign reasons. The aim was to validate the necessity of the category of so called borderline changes, whose morphology was proven to overlap with physiological finding within healthy uterine cervix. Therefore, there is no need for immunosuppressive therapy in such cases. In case of recipients, the thesis investigates the role of pulmonary megakaryocytes in explanted lungs after transplantation. The idea was to elucidate pathogenesis of the diseases leading to the need of transplantation itself. Pulmonary megakaryocytes within explanted lungs of various recipients were mapped using histopathological methods and immunohistochemistry. The strikingly increased number of such cells was detected among vascular disorders, especially idiopathic pulmonary hypertension. This finding could contribute to the explanation of vascular remodelling in this so far cryptogenic disease. In both cases, this thesis shows the importance of histopathological examination, which provides valuable information to the transplant team, undetectable via another method.

Keywords: borderline rejection, idiopathic pulmonary hypertension, lung transplantation, pulmonary megakaryocytes, uterus transplantation.