process and is not caused by simple proliferative stimuli. The immunohistological demonstration of altered class II MHC antigen expression proves diagnostically valuable already during early phases of rejection which cannot be unequivocally assessed by conventional histology. Moreover, the profound changes in graft histocompatibility antigen expression might affect the effector phase of the rejection process.

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14. Serological demonstration and manipulation of passenger cells (PC) in pancreas islet grafts

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One reason for the failure of pancreatic islet grafts in MHC fully allogeneic and strongly immunogenic combinations may be incomplete elimination of PC from the graft. Therefore serological studies with isolated, intact, fresh or cultured rat islets were performed: Islets were incubated in monoclonal antisera (OX2, OX6, OX22, W3/25) or in cell group-specific xenosera (antilymphocyte, antimacrophage, antidendritic cell sera). Results: (1) Gentle trapping of intact islets between slide and cover slide («islet burger») provides a simple and effective means of detecting the various types of cells in the 3-dimensional islet structure by immunofluorescence (IF) microscopy: the number, shape and localization of PC, i.e., lymphocytes, macrophages and dendritic cells within the individual islet become clearly demonstrable and are documented. (2) The partial disintegration of Ia^+ cells after periods of in vitro culture is shown. (3) Pretransplant screening of the islets after preincubation in cell group-specific antisera plus complement shows a successful lysis of lymphocytes, macrophages and dendritic cells. (4) Preliminary in vivo experiments indicate that the function of such manipulated islet grafts remains unaffected in a MHC fully allogeneic rat strain system. Conclusions: (1) «Islet burger» IF microscopy of intact islets provides a useful pretransplant approach to studying the effects of serological graft manipulation. (2) Short term islet incubation with appropriate, cell group-specific, cytotoxic antisera appears to compete favorably with other approaches to reducing islet immunogenicity.

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15. Reconstitution of immunogenicity of lymphocyte-free bone marrow (LXBM) by MHC-restricted and lymphocyte-derived factors

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During experiments on fully allogeneic bone marrow (BM) transplantation in rats we studied the role of lymphocytes and of soluble factors derived from alloantigen-stimulated proliferation-blocked lymphocytes for the immunogenicity of LXBM. Methods: LEW ($RT1^l$), CAP ($RT1^c$), DA ($RT1^a$) and AS ($RT1^l$) rats were used. LXBM was prepared by BM treatment with a specified anti-lymphocyte serum plus complement. Factor-containing culture supernatants (FCSN) were produced by 48h coculture of Mitomycin C treated cells. Test system was a