Pancreatic transplanttation

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Inspite of the advances in the medical technology of treatment of diabetes the patients still ran the risk of intermittent hypo- or hyperglycaemia. The goal is to achieve normoglycaemia in diabetic patients and to halt or reverse diabetic complications. It wasfound that the only way to solve this problem is to transplant the endocrine tissue which secrets insulin according to the need of the body which is the whole or part of the pancreas. from December 1986 to July 1992 4000 clinical pancreatic transplantation had been performed. Usually cadaver organs are used and most recipients have diabetic end-stage renal disease; both kidney and pancreas are transplanted in a single operation. Increasingly however, as success grows, pancreatic transplantation is being carried out in patients before advanced renal disease occurs. In fact, one fourth of all pancreatic transplantation performed -between 1986 and 1990 did not receive a simultaneous kidney.Successful whole organ or segmental pancreatic transplants produce circulating insulin and normal plasma glucose levels. When the venous drainage of the pancreatic graft is hooked up to the systemic circulation, the circulating insulin levels are higher than when the venous anastomosis is made to the portal system, although the plasma glucose levels are similar. Rejection episodes are as difficult to reverse as they are to detect. Also rejection is difficult to be detected by means of the change in the bloodglucose levels, because when blood glucose becomes abnormal, rejection is usually too far advanced to be reversed. Serum amylase do not become elevated when rejection episodes occur, so it can’t be taken as marker for rejection. When pancreatic duct is anastomosed to the bladder, however the urine amylase level can be monitored because it falls early in the rejection response. Thus drainage of the exocrine secretion to the urinary bladder is the most successful technical solution and also permits better immunologic monitoring of the rejection response. The exocrine secretion could be also drained to the gut or prevented by ligation or injection of the pancreatic duct by synthetic rubber material.Experience in human beings, has shown that functioning vascularized pancreatic allograft will correct the metabolic deficiency in diabetes and it also prevent further progress in the secondary complication of diabetes, furthermore the renal complication may be reversed. The techniques are now more safer and more successful. Graft survival has been steadily improving; for patient who received grafts between 1988 and 1990, slightly greater than 60%of grafts were functional at 36 months in contrast with only 18% in 1978-1982. Most current clinical research continues to focus on methods of pancreatic exocrine secretion without inducing pancreatitis. Rejection thrombosis, and fibrosis still remain problems to widespread clinical application in

the early stage of diabetes. Following successful pancreatic transplantation, the patient becomes insulin independent, and can also abandon all dietary restrictions. To many patients the freedom to eat whenever and whatever they wish has great social implications. Also in psychological sense the quality of life is much enhanced after successful pancreatic transplantation. Many patients express a sense of great relief and freedom; a long-lasting disease has come to an end. Also it is by now clear that the metabolic control is superior to what can be achieved with any other form of treatment available today. These impressive advantages have to be weighed, however against the risk of the surgical procedure and by the immunosuppressive treatment required after transplantation. When pancreatic transplantation is carried out in conjunction with renal transplantation, these problems are largely circumvented. However, when single pancreatic transplantation is to be carried out, it must be performed only when the risks of surgery and immunosuppression are similar or smaller than the risks incurred by the patient's disease. In practice, however this is not an easy judgement. It is, however, important to consider not only the life span but also the life quality of the patient. What if the remaining life will entail uraemia, blindness and amputations. So with better selection of the patients, better techniques and less surgical complications, pancreatic transplantation will be the best treatment for type I and occasional patients of type II D.M.