Peritoneal Lavage Therapy for Severe Acute Pancreatitis after Renal Transplantation

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Dear Sir,

Acute pancreatitis is an infrequent but often lethal complication after kidney transplantation [1, 2]. A recent survey documented a mean incidence of 2.3% and a mean mortality rate of 61.3% [3, 4]. A multiplicity of factors may be responsible for the development of acute pancreatitis after kidney transplantation [3-5], which makes it difficult to identify the etiology. In addition, it is difficult to manage and treat this complication and preserve the graft function because of the immunocompromised condition. Recently, we successfully treated a kidney transplant patient with severe acute pancreatitis with cystic lesions with peritoneal lavage.

A 42-year-old man maintained on hemodialysis received a kidney from his mother. The patient was treated with a triple immunosuppressive regimen consisting of cyclosporin, azathioprine and methylprednisolone after transplantation. He did well and was discharged with a serum creatinine (s-Cr) level of about 2.0 mg/dl 1 month after transplantation. He developed upper abdominal pain and high fever and was admitted to the hospital again 2 months after transplantation. The abdomen was distended and some ascites was present. Tenderness was observed in the right hypochondrium. The allograft was not enlarged and not tender. An ultrasonography and a CT scan demonstrated a swelling of the head of the pancreas and an irregularity of the pancreas. Laboratory tests showed a serum amylase level of 1,100 U/l, an s-Cr level of 1.7 mg/dl and a white blood cell count of 10,200/mm³. The patient was diagnosed as having acute pancreatitis and received conservative therapy with FOY, antibiotics, adequate fluid supply, and food deprivation. During this episode, the s-Cr level gradually increased and then methylprednisolone bolus therapy was

Fig. 1. CT reveals enlargement and irregularity of pancreas head with large cystic lesion.

Thereafter, abdominal symptoms progressively worsened. Tenderness, defense and Blumberg's sign appeared. Laboratory tests revealed a serum amylase level of 5,800 U/l, lipase 2,250/1, calcium 8.0 mg/dl, total protein 5.0 g/dl, total bilirubin 0.6 mg/dl, serum GOT 10 kU, serum GPT 15 kU, LDH 227 mU/ml, r-GTP 31 mU/ml, white blood cell count 11,000/mm³, hemoglobin 6.8 g/dl and hematocrit 20.6%. A CT demonstrated enlargement and irregularity of the pancreas, especially the head of the pancreas with a large cystic lesion, that were compatible with necrotizing pancreatitis. In addition, a peripancreatic and retroperitoneal fluid collection was observed (fig. 1). A deterioration of acute pancreatitis was diagnosed

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Post-Transplant

Fig. 2. Clinical course. CYA = Cyclosporin; AZ = azathioprine; MZ = mizoribine; MP = methylprednisolone.

ments and his abdominal and general condition gradually improved. The serum amylase level decreased and was maintained at about 700 U/l. The s-Cr level was also maintained at about 1.5 mg/dl during and after peritoneal lavage. A CT showed the disappearance of the swelling and the irregularity of the pancreas and pancreatic cyst. The further recovery of the patient was uneventful and the renal function remained stable (fig. 2).

Since acute pancreatitis often leads to organ failure including graft failure in the transplant patients, early treatment and an adequate choice of treatment modality are required to preserve the graft function. Especially, in a case with multisystem failure, intensive care with blood purification is essential. Peritoneal lavage could remove ne-crotic pancreatic tissues

and toxic substances in the pancreatic peritoneal exudate from peritoneal cavity and reduce the edema of the pancreas. The peritoneal lavage therapy could also keep the circulatory condition

stable and remove uremic toxins in combination with peritoneal dialysis. Ranson et al. [6], Kauste et al. [7] and Lasson et al. [8] observed the efficacy of peritoneal lavage on severe acute pancreatitis in nontransplant patients with severe disease.

In our renal transplant case, peritoneal lavage and dialysis had a good result and did not influence the circulation and function of the graft. Our results suggest that peritoneal lavage may be a useful treatment for severe acute pancreatitis that could not be treated conservatively after renal transplantation.

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430

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