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Successful Treatment of Enterocutaneous Fistula in a Hemodialysis Patient with Somatostatin

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Although cysticercosis is the most common parasitic disease affecting the central nervous system, spinal cysticercosis is rare. A rare form of spinal cysticercosis involving the whole spinal canal is presented. A 45-year-old Korean male had a history of intracranial cysticercosis and showed progressive paraparesis. Spinal magnetic resonance scan showed multiple cysts compressing the spinal cord from C1 to L1. Three different levels (C1-2, T1-3, and T11-L1) required operation. Histopathological examination confirmed cysticercosis. The patient improved markedly after surgery.

Key Words: Neurocysticercosis, subarachnoid space, spine, central nervous system parasitici infections

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Sir,

Enterocutaneous fistula (ECF)-related morbidity and mortality can be high due to fluid loss and electrolyte imbalance, sepsis, and malnutrition. ECF is a rare problem in hemodialysis (HD) patients. Even in non-renal patients with ECF, disagreement about therapeutic options remains. To the best of our knowledge, we report the first clinical experience among HD patients related to the treatment of postoperative ECF by somatostatin.

31-year-old female HD patient was admitted to our emergency department with complaints of abdominal pain, weakness, and lack of appetite that had developed during the 16 hours since the last HD session. Primary kidney disease was focal segmental glomerulosclerosis which was diagnosed in 1997. She has been treated by HD, three times a week for three years.

Diffuse intraabdominal bleeding and multiple hematomas were considered as diagnosis. Laparatomy was performed and diagnosis was confirmed. This problem may have resulted from prolonged bleeding of left ovarian corpus haemorrhagicum due to administration of classical heparin.

Three weeks after operation, purulent incisional drainage and fever developed. Despite empirical antimicrobial treatment, fever and drainage continued to increase. On the 3rd day, drainage composition included intestinal fluid. ECF was considered and confirmed by abdominal CT. Inflammatory bowel disease (*i.e.* Crohn's disease) was eliminated. Oral intake was stopped and total parenteral nutrition (TPN) was started. Despite ten days of TPN and parenteral antibiotic treatment, the amount of drainage gradually increased to 425 mL/day. At that point, TPN and antibiotics were stopped, and somatostatin was administered alone for ten days (250 μg, intravenous [i.v.] bolus; then, 250 μg/day, i.v. for 10 days). On the 4th day of treatment, drainage decreased gradually and ECF closure defined as no fistula output for 2 successive days was achieved completely on the 9th day of treatment. The patient was discharged as healthy, and was followed asymptomatically for three months.

A postoperative ECF is a very rare problem in HD patients. There are a few medical treatment options for ECFs, including TPN, high dose i.v. immunoglobulin, somatostatin and its analogue octreotide. In fact, these options were developed and reported in the literature primarily for the non-renal population. Their efficacies in HD patients are still unclear.

Pharmacological treatment of patients with ECFs aims at reducing output, increasing the chance of spontaneous closure and reducing the time until fistula closure. Somatostatin inhibits several gastrointestinal functions. In cases where total TPN alone for 7 days has failed to influence high output fistulas, overall data support the use of adjuvant drug, somatostatin, or its synthetic analogue, octreotide, in non-renal patients (1). Somatostatin is potent in inhibition of glucagon release, splanchnic blood flow, intestinal motility and gastric exocrine secretion. Somatostatin 250 μg/d and its analogue, octreotide 300-600 μg/d have been employed along with TPN to decrease the healing time of ECFs and to reduce the number of complications.[1] While some authors suggested that various kinds of ECF; including postoperative, intestinal, pancreatic, biliary, malignant or multiple ECF were treated successfully by somatostatin or octreotide,[1] other authors disagreed.[2] Spiliotis et al.[3] showed that somatostatin is superior to TPN alone for ECF treatment.

The plasma somatostatin levels increase due to reduced clearance in HD patients, and renal insufficiency may, itself, induce an increase in some gastrointestinal peptides capable of stimulating somatostatin secretion.[4] HD treatment does not produce any changes in somatostatin levels.[5] As such, we did not change our patient's dialysis schedule. Because it is rarely used, the adverse effects spectrum of somatostatin remains unknown in HD patients. Some authors noted that somatostatin treatment may result in hyperkalemia in HD patients.[6] Under these circumstances, our patient showed no clinical or laboratory adverse effect during treatment and after.

To the best of our knowledge, this is the first clinical experience with somatostatin among HD patients with ECF. We concluded that somatostatin has been shown to be very useful in the conservative treatment of ECFs in HD patients without serious adverse effect, because of its ability to rapidly reduce fistula output and accelerate spontaneous closure.

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