— Sun-73 —

Percutaneous Catheterization of the Internal Jugular Vein for Hemodialysis

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Objectives : The present study was aimed at evaluating the clinical experiences in the internal jugular venous catheterization for hemodialysis.

Method : We retrospectively analyzed the data on internal jugular venous catheterization at Chonnam National University Hospital from May 2000 to Februrary 2001.

Results : There was 132 uremic patients with a total of 150 attempts of internal jugular cannulation. Overall success rate was 90.9% with average puncture trials of 2.3±2.1; 124(82.7%) of the catheterization attempts were made on the right side and 26(17.3%) were made on the left. The catheters were left in place from 2 to 87 days with an average of 19.5±15.3 days per catheter. The dialysis sessions per catheter were from 2 to 58 with an average of 11.3±6.8. The mean blood flow during hemodialysis immediately after catheterization was 213.4±42.2 ml/min. Thirty two(21.3%) patients had early complications. These included carotid artery puncture(11.3%), local bleeding(4.7%), local pain(3.3%), neck hematoma(0.7%), and malposition of the catheter(1.3%). Seventeen (11.3%) patients had late complications. These included fever or infection(11.3%), inadequate blood flow rate(3.3%), and inadvertent withdrawal(2.0%). There was no catheter-related mortality.

Conclusions : Our experiences revealed that the internal jugular vein catheterization is relatively safe and efficient for temporary vascular access for hemodialysis.

— Sun-74 —

Hungry Bone Syndrome in a Hemodialysis Patient Following Parathyroidectomy

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Surgical parathyroidectomy is indicated for patients with severe hyperparathyroidism who are unresponsive to diets, phosphate binders, and calcitriol therapy. Hungry bone syndrome may occur following parathyroidectomy in primary hyperparathyroidism, but there have been very limited reports in secondary hyperparathyroidism. To our best knowledge, hungry bone syndrome in a end-stage renal disease patient has not yet been reported in Korea. So we report this case with a brief literature.

CASE: A 29-year old woman was admitted with a chief complain of fatigue and muscle weakness. 20 days before admission, she underwent surgical parathyroidectomy for severe and intractable secondary hyperparathyroidism. She had been on hemodialysis for 5 years. In January 2001, marked secondary hyperparathyroidism complicated by hyperphosphatemia and intractable pruritus. Intensive regimen of diet, phosphate binders, and calcitriol therapy failed to adequately suppress iPTH levels. A subtotal parathyroidectomy was performed in March 2001. Histopathologic examination revealed a characteristic nodular hyperplasia of parathyroid glands. Severe and prolonged hypocalcemia was developed within 12 hours of parathyroidectomy. During first postoperative week, elemental calcium supplementation intravenously and oral calcium carbonate in combination with oral calcitriol were administered. At the time of discharge, the serum calcium level was increased to 7.5 mg/dl. Severe hypocalcemia occured at the 20th day following parathyroidectomy and serum total calcium level was 5.8 mg/dl. The iPTH level was 104 pg/ml and serum calcitriol level was 3.5 pg/ml. Intravenous calcium supplementation and oral calcium carbonate in combination with oral calcitriol were continued. The severity of hypocalcemia was slowly improved. Her serum calcium level was rised from 5.8 mg/dl to 8.2 mg/dl, iPTH level was 330 pg/ml and serum calcitriol level was 8.5 pg/ml on the 50th day after parathyroidectomy. She was discharged and prescribed oral calcitriol, 0.5 ㎍ twice daily and calcium carbonate 1 g three times daily.