Cardiac tamponade following insertion of an internal jugular vein catheter for hemodialysis

Departments of Internal Medicine, Thoracic and Cardiovascular Surgery1 Wonkwang University School of Medicine, Iksan, Republic of Korea

*Yu-Min Lee, Hyeon-Jeong Kim, Ji-Eun Lee, Jin-Ho Shin, Ju-Hung Song, Mi Kyung Lee1, Sam Youn Lee1 and Seon-Ho Ahn

Introduction: Percutaneous cannulation of the internal jugular vein (IJV) is widely used for patients suffering with end stage renal disease. As with all invasive procedures, it is associated with a number of recognized complications. Cardiac tamponade is one such complication. Cardiac tamponade is thought to arise from the guide-wire, the dilator and venous cannulation perforating the right atrium, the right ventricle and on rare occasion the superior vena cava. We report here on a case of cardiac tamponade that was caused by perforating the inferior vena cava (IVC) via the guide-wire while attempting IJV catheterization under echographic guidance.

Case Report: A 62-year-old woman with end stage renal disease secondary to diabetic nephropathy presented with anorexia and dyspnea. Because the patient had severe uremic symptoms, we planned to start emergency hemodialysis. Her arteriovenous fistula for hemodialysis was not adequately created; therefore, IJV catheterization was needed. With the patient in the Trendelenberg position, we inserted a soft j-tipped guide-wire into the right jugular vein under echographic guidance. No resistance was encountered when inserting the guide-wires, dilators or catheters. Over the next few minutes, the patient's systolic blood pressure gradually decreased to 70 mmHg. The jugular venous pressure was not elevated, and her heart sounds were normal. Yet an emergency echocardiogram and chest CT scan were done because it was necessary to rule out occult vascular injury associated with the procedure. A large pericardial effusion was identified on the emergency echocardiogram and chest CT scan. An exploratory median sternotomy was immediately performed. The pericardial sac was tense and it contained a large amount of blood with grossly visible clots. In the IVC adjacent to the RA, a scratch and a 1mm sized hole was found and then primary closure was done. These lesions were thought to be due to penetration of the IVC wall by a guide-wire because of the distance from the access site to the perforation site. The vital signs of the patient were stabilized after the operation. The postoperative course was uneventful, and the patient was discharged 22 days later.

Fibrillary Glomerulonephritis with unusual IgA, IgM Deposits

부산의료원 내과1, 부산대학교 의학전문대학원 병리학교실2

*남현경1, 설미영2

Idiopathic fibrillary glomerulonephritis is uncommon glomerulopathy that accounts for less than 4% of renal biopsies that are done for the evaluation of nephrotic syndrome. The diagnosis is made by amyloid negative fibrillary deposition on electron microscopy of the kidney. The immune deposits are predominantly IgG and C3. We present here a rare case of an atypical form of fibrillary GN characterized by unusual IgA, IgM deposits. A 33 year-old male was admitted with severe generalized edema and foamy urine. The blood pressure was 130/80 mmHg. Blood urea nitrogen was 11.8mg/dL and serum creatinine was 0.9 mg/dL. Creatinine clearance was 97.6 mL/min/1.73m2. ANA, ANCA, serum cryoglobulin were all negative. serum C3/C4 was 58/7 mg/dL respectively, and antistreptolysin O titer was 32 IU/mL. Serum total protein and albumin were 6.2 and 3.1 g/dL. In urinalysis, RBC was dysmorphic, and many/HPF. 24 hour urinary protein was 1, 920g/day. Serum protein electrophoresis showed no abnormalities and urine electrophoresis showed selective glomerular proteinuria. Renal biopsy was performed. The light microscopic examination revealed thickened peripheral capillary walls which revealed double contour on silver stain and occasional proteinaceous subendothelial materials. Congo red stain was negative. Tubules, interstitium and blood vessels were unremarkable. Immunoflorescence study was positive for IgA, IgG, IgM, C3, C4, fibrinogen, kappa and lambda light chain. On electron microscopy, subendothelial, intramembranous and mesangial fibrillary deposits were noted. Fibrillary material measured 11.4 nm in average thickness. We experienced a rare case of fibrillary GN with unusual IgA, IgM deposits.