Lymphorrhea following Percutaneous Right Supraclavicular Hemodialysis Catheter Placement

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Dear Sir,

Percutaneous cannulation of the central venous system is commonly employed to provide temporary access for hemodialysis typically being achieved by infraclavicular sub-clavian or internal jugular venipuncture [1]. The supraclavicular approach is currently utilized at our institution [2]. This report deals with an unusual complication, persistent lymphorrhea, encountered during the application of this technique.

A 36-year-old female with end-stage renal disease secondary to glomerulonephritis was referred for placement of a temporary hemodialysis catheter. A 9-F double-lumen polyurethane dialysis catheter was placed uneventfully by the right supraclavicular route by the method described by Conroy et al. [3]. Postprocedure chest roentgenogram confirmed ideal catheter placement without hemopneumothorax. Twenty-four hours following insertion the patient returned for dialysis. A copious amount of clear drainage was observed flowing from the catheter exit site, consistent with lymph found in the right lymphatic duct [4]. The site was managed on an ambulatory basis by frequent dressing changes. Lymphorrhea persisted, and on the eleventh day the patient was noted to be febrile. The catheter was removed and *Klebsiella pneumoniae* was cultured from the catheter exit site as well as the patient's blood. The patient responded to the administration of appropriate antibiotics, and all the lymphorrhea ceased within 24 h following removal of the catheter.

Three months following this episode the patient again required the establishment of a temporary hemodialysis access. The right

supraclavicular approach was repeated, this time without incident.

Percutaneous central venous catheterization is a commonly performed procedure in medical practice. Although the procedure is safe in experienced hands, a myriad of early and late complications may occur. Lymphatic duct injury with subsequent lymphorrhea or chylothorax has been reported as an infrequent complication. The prominent thoracic duct is more commonly violated during left-sided central venous catheterization [5-7]. The smaller right lymphatic duct terminates near the confluence of the subclavian and jugular veins and appears less susceptible to injury [4]. Two reports, however, describe lymph duct injury following right infraclavicular subclavian and internal jugular venipuncture [8,9]. We believe the case described herein to be the first report of cutaneous lymph fistula following right supraclavicular central venous catheter placement.

Placement of hemodialysis catheters by the supraclavicular route appears to be of utility and perhaps the procedure of choice for the establishment of temporary access [2]. Should central venous hemodialysis catheter placement be complicated by a cutaneous lymph fistula, prompt removal of the catheter appears warranted to control the drainage and prevent septic complications. The occurrence of this rare complication should not limit the application of this approach.

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