Lipectomy as a new approach to secondary procedure superficialization of direct autogenous forearm radial cephalic arteriovenous accesses for hemodialysis

The depth of an upper extremity vein may discourage the surgeon from creating an autogenous access and similarly may make cannulation in the hemodialysis center problematic. The authors present a single center study of 49 consecutive patients who underwent lipectomy after prior creation of a radial-cephalic fistula. They conclude that lipectomy is safe, effective, and durable as a secondary intervention to make deep arterialized forearm veins accessible for routine cannulation in obese patients.

Open secondary procedures on hemodialysis arteriovenous (AV) access grafts and fistulae are described by three distinct CPT codes. First, open thrombectomy without revision is reported by CPT code 36831. This has been assigned 8.01 work relative value units (RVUs) and 12.57 total RVUs in the 2009 Medicare Physician Fee Schedule (MPFS). No patients in this manuscript were treated in this fashion.

Second, open revision of the AV access to maintain patency is reported by CPT code 36832 with 10.50 work RVUs and 16.06 total RVUs designated in the 2009 MPFS. Besides detailing correction of a venous outflow or arterial inflow stenosis, this descriptor includes plication or bypass of aneurysmal disease within the hemodialysis circuit, ligation of venous side branches that may prevent access maturation, proximalization of the conduit as needed, and superficialization when the vein or graft traverses too deeply in the arm. Bringing the conduit closer to the skin for appropriate cannulation in the hemodialysis access center may be accomplished by transection and retunnelling or, alternatively, by mobilization and re-closure. The authors describe a new technique for superficialization where the fat overlying the access is removed through several transverse incisions in the forearm. This newly described procedure falls under the category of CPT code 36832 as well.

Recent reports describe creation of an upper arm basilic vein transposition in both a one-stage and a two-stage fashion. The one-stage procedure is simply reported by CPT code 36819. However, the two-stage procedure initially involves creation of a direct brachial artery to basilic vein fistula (CPT code 36821). The second stage requires ligation of side branches with superficialization and/or retunnelling of the vein in a separate setting after the vein has thickened and matured. As an alteration of an existing and patent autogenous AV access, this second intervention would be reported by CPT code 36832. If the subsequent surgery was performed within the 90-day global period for the direct brachio-basilic arteriovenous fistula creation, modifier -58 (staged or related procedure or service by the same physician during the postoperative period) would be appropriate on the revision descriptor. Use of the -58 modifier does not translate into a reduction in reimbursement for that second operation.

Third, CPT code 36833 is most fitting if the revision is accompanied by a thrombectomy in the same setting. This has 11.95 work RVUs and 18.15 total RVUs in the 2009 MPFS. Please be aware that this code is an open surgical description and does not include endovascular imaging or intervention that may be reported separately based on the case scenario.

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