Objective(s): Diabetes mellitus often portends worse outcomes for patients undergoing vascular surgery. We hypothesized that insulin-dependent (IDDM) diabetics would have worse outcomes vs. non-insulin dependent (NIDDM) diabetics undergoing carotid endarterectomy (CEA).

Methods: A single-institution retrospective review of 300 consecutive CEA’s from January 2011-2015 was performed. We evaluated patient demographics, insulin dependence, peri-operative outcomes and length of stay. The patients were divided into 2 groups: IDDM and NIDDM. Statistical analyses were performed comparing the outcomes by using Fisher exact test, and t-test.

Results: We screened 300 consecutive patients who underwent CEA at a single institution of which 113 (38%) were diabetic. The mean age of the diabetics was 68.9 years and 58% were male. 35% (n=40) were IDDM and 65% (n=73) were NIDDM. CAD was prevalent in 43.2% (n=16) of the IDDM patients vs 56.8% of NIDDM (p=0.29). HTN was present in 100% of the patients in the IDDM group and 95% of the NIDDM patients. The mean BMI of the IDDM was 30.3 and 28.2 in the NIDDM group (p=0.12). IDDM had a mean LOS of 4.65 days vs 3.09 days for NIDDM (p=0.1). Procedure time was higher in the IDDM group, 132.98 mins when compared to NIDDM, 120.73 (p=0.08). We noticed a trend of IDDM patients having longer procedural time and length of stay, however statistical significance was not achieved. There were no noted cases of intra-operative stroke, myocardial infarction, death or perioperative pulmonary embolism. Reintubation was required in one IDDM and two NIDDM this was not statistically significant. Surgical site infection was noted in one patient who was NIDDM. Nine patients (3%) required post-operative transfusion: two of whom required transfusion for cardiac surgery which followed CEA, remaining seven patients were diabetic: two were IDDM and five NIDDM, not statistically significant. There were 5 (1.6%) cases of postoperative MI, 2 (0.6%) were IDDM and 3 (1%) were NIDDM. This was not statistically significant.

Conclusions: Insulin dependent diabetes mellitus may increase length of procedure and hospital stay, however, it does not increase the need for blood transfusion, intraoperative or perioperative complication rates for CEA.