**TECHNIQUE AND PROCEDURAL OUTCOME OF PERCUTANEOUS CORONARY INTERVENTION FOR CHRONIC TOTAL OCCLUSION**

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Background: Percutaneous coronary intervention of chronic total occlusion (CTO-PCI) is associated with technical difficulty and complications. Data on which technique associated with higher success rate is unknown.

Methods: We retrospectively reviewed medical records of patients whom were diagnosed with chronic total occlusion (CTO) at a University Medical Center, Lubbock, Texas between October 2007 and November 2010.

Results: 2,033 cardiac catheterization reports were reviewed. 188(9.2%) patients had CTO with total of 219 CTO lesions. The most common CTO vessel was the right coronary artery 44.6%. Of these 219 CTO lesions, 112(51.1%) had CTO-PCI, 45(20.5%) had aortocoronary bypass surgery, and 62(28.3%) managed medically. The CTO-PCI success rate was 57.1%. Of those CTO-PCI, the most common PCI techniques were antegrade approach with sub-selective support 88(78.6%). Other techniques included 12(10.7%) laser atherectomy, 7(6.3%) controlled antegrade and retrograde tracking technique, and 5(4.5%) parallel wire. There was no difference in success rate or complication among techniques (p=0.126 and 0.134, respectively). There were 22(19.6%) complications including coronary artery dissection or perforation 17.9%, arrhythmia 0.9%, and death 0.9%.

Discussion: CTO-PCI attempt rate in our institution is significantly higher than 2007 National Cardiovascular Data Registry database (51.1% versus 11.8%). Intervening on CTO has shown to improve in symptoms, left ventricular function, and mortality. The overall complication rate in our institution is comparable to the national data. Our CTO-PCI success rate was 57.1% that is lower than recent meta-analysis data of 69%.We use the retrograde approach rarely; therefore, increase experience in retrograde technique could potentially improve the success rate in our institution.