**FLUOROSCOPY GUIDED AXILLARY VEIN PUNCTURE AS A RELIABLE METHOD FOR PACEMAKER, DEFIBRILLATOR AND CRTD INSERTION**

**M.S. Hettiarachchi**, A. Faraj, S. Fares, A. Saulitis, M. Siddiqui

Detroit Medical Center, Sinai-Grace Hospital, Wayne State University, Detroit,

MI, USA

Background: The subclavian venous approach is the widely used method for venous access in device implantation and is associated with pneumothorax and lead fracture as complications. The cephalic cut down reduces lead fracture but small diameter vessels makes insertion of multiple leads difficult. Axillary vein approach is explained as an alternate method but there are no large scale studies showing outcome of fluoroscopy-guided axillary vein puncture (FGAVP).

Methods: This is a retrospective observational study on patients who underwent pacemaker or defibrillator implant or lead change over 23 months using FGAVP. Immediate complications (pneumothorax and hemothorax) are considered as primary endpoints and long term complications (Lead fracture) as secondary endpoints.

Results: Out of 261 device implants or lead changes 210 patients underwent FGAVP. Mean age of the patients was 65.43 ± 15.7 years; 96.1% are African American; 57.6% are male. In 194 (92.3%) patients left or right axillary vein approaches were successful by either fluoroscopy or venography guidance. When anatomical abnormalities are excluded the success rate for AVP is 97% and FGAVP is 94.5 %. Multiple leads were placed without any resistance and none of the patients had pneumothorax, hemothorax or hematoma as immediate complications.

Conclusion: Zero immediate complications with overall high success rate were observed in this single operator experience with FGAVP in a relatively larger population. We report that FGAVP is a safe and effective method for device implantation with single or multiple leads including left ventricular epicardial leads, without patients getting exposed to intravenous contrasts.