**AN UNUSUAL CASE OF INTRACARDIAC FOREIGN BODY FOLLOWING A NECK INJURY; A CASE REPORT AND REVIEW OF LITERATURE**

**M. Ghanim**, S. Bsata, B. Campbell, G. Daly, A. Agnihotri, L. Tsao

Saint Elizabeth Medical Center, Brighton, MA, USA

**Introduction:** Intracardiac foreign bodies are a rare occurrence in clinical practice. They are associated with significant morbidity and mortality. We report an unusual case involving the transmigration of a needle fragment from the lumen of the right internal jugular vein to the right ventricle, following a traumatic neck injury.

**Case Report:** A 34-year-old male presented for foreign body removal after a neck injury. He reportedly was working underneath his truck when his toolbox dropped into the fan belt that caused some pieces of shrapnel to spray across his neck. On examination he was vitally stable. He had an entry-wound at the right base of his neck. Cardiopulmonary exam was within normal limits. CT scan and x-ray neck showed a linear radiopaque structure, 2cm in length, within the lower ventral right neck. Patient was taken to the operating room; however, the object could not be located after extensive neck exploration. A repeat CT scan and x-ray neck didn’t show the foreign body in the neck. CT scan and x-ray chest showed migration of the foreign body to the right ventricle. Patient underwent surgical removal of the foreign body, using a median sternotomy approach without complications.

**Discussion:** In our case, the foreign body entered through the neck and migrated via the right internal jugular vein into the right ventricle. On literature review from 1989-2017, we found 54 similar cases with intracardiac needles. The mechanism of injury was variable; 41% involved intentional injuries, 35% were accidental, and 24% involved IV drug use. Major complications were pericardial effusion (16%), pericarditis (11%), and cardiac tamponade (11%). Other complications (24%) included infective endocarditis, pulmonary embolism and stroke, while 37% had a benign course. Management options included, surgical removal (83%), transvenous removal (6%), and 11% of cases opted for conservative management.

**Conclusion:** Intracardiac foreign bodies can be introduced through open neck wounds via the internal jugular vein. An accurate history is important, and a low threshold of suspicion should be maintained in high-risk patients such as IV drug users. With the use of multimodality tools, a diagnosis can easily be made.