Introduction

Pediatric patients presenting for proton radiation therapy in our free standing proton therapy center are required to have central venous access for daily anesthesia. Central venous catheters rarely fracture, most commonly occurring at the space between the clavicle and the first rib (1). Fracture complications include cardiac tamponade, catheter migration and cardiac perforation, Pulmonary embolism (PE), arrhythmias, thrombosis and death (1, 2). We present the case of a 1 year old coming for proton radiation therapy who on x-ray for proton alignment was discovered to have a possible port catheter fracture dislodged into the right ventricle.

Case Report

A 1 year old child presented for proton radiation therapy for alveolar rhabdomyosarcoma in the left orbit. Patient was sedated under propofol total intravenous anesthesia through a port in the left chest. Prior to proton radiation therapy, an x-ray was done to confirm posterior-anterior (PA) and lateral positioning to align the proton beam. On the anterior-posterior x-ray, it was observed that the shadow of the port catheter was not continuous. The tip of the catheter appeared to have migrated into the right ventricle (figure 1). The patient was taken to interventional radiology where they performed a percutaneous image-guided removal of the intravascular catheter fragment.

Discussion

Central venous catheters can fracture and embolize and lodge in anywhere in the distal circulation leading to many complications including perforation of vascular system and myocardium, rupture of valves, and infection. Anesthesia teams providing care for patients with central venous access in offsite areas that perform chest imaging should evaluate the chest image if one is taken during the procedure for any abnormalities. If an abnormality is seen, consultation should be made for removal of the central venous catheter as the complications can be catastrophic.

Learning Point

It is imperative that any chest imaging performed under sedation should be assessed by the anesthesia providers for any abnormalities, including central venous catheter fracture in patients with central venous access.

References


Vadlamani, P. D. Buddhadeb, M. Perry. Catheter fracture and embolization from totally implanted venous access ports.