Spontaneous Asymptomatic Chemoport Fracture with Cardiac Migration

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Central venous access devices are usually used nowadays in oncology for administering chemotherapy, of which implantable chemoports are the most common. Spontaneous breakage and migration of the catheters is a very rare complication. Herein, we report a case of spontaneous breakage and cardiac migration of a long tubular part in which the patient was entirely asymptomatic. The patient was successfully managed by an interventional cardiologist. A 56-year-old female patient was diagnosed with acute lymphoblastic leukemia (Philadelphia chromosome detected) on 7th February 2022. She was planned for chemotherapy as per the modified Berlin-Frankfurt-Munich (BFM) protocol. A vascular access chemoport catheter was surgically inserted via the right internal jugular vein (IJV) for the administration of chemotherapeutic drugs (BardPort® implantable port with Groshong catheter) under general anesthesia on 11th February 2022 (Fig. 1A). The catheter had remained in the position till 26th March 2023 without any complications (Fig. 1B). During her maintenance chemotherapy on 16th June 2023, it was found that the chemoport was not working and there was no backflow as well as forward flow. The chemotherapy was given through a peripheral vein, and X-ray chest was done to look up for chemo port status (Fig. 1C). It was observed that the distal intravascular part of the catheter wasn’t seen, and a faint shadow could be seen within the cardiac silhouette (black arrow, Fig. 1C). It raised a possibility of spontaneous

Figs 1A to F: (A) Chemoport catheter in situ; (B) X-ray dated 26th March 2023 showing chemoport with extra and intravascular parts of a catheter; (C) X-ray dated 16th June 2023 showing proximal part of chemoport in situ and tip of the distal part within the cardiac silhouette; (D) Proximal part of chemoport removed under local anesthesia; (E) NCCT chest showing distal part of approximately 11.5 cm lying in the right ventricle and right atrium; (F) Distal embolized long segment removed using a goose-neck snare technique by interventional cardiologist

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fracture of the cannula after 26th March 2023 with embolization of its distal part and the proximal part of the chemoport was removed under local anesthesia (Fig. 1D). As it could not be removed completely, it confirmed fracture of the catheter at the insertion site of IJV with embolization of its distal part. Noncontrast computerized tomography (NCCT) chest was done, and it showed a distal long tubular intravascular part of the catheter of approximately 11 centimeters lying in the right ventricle and right atrium (arrow, Fig. 1E). She was admitted for right heart catheterization and its retrieval. She was transferred to the catheterization laboratory, and the fragmented catheter was removed using a goose-neck snare technique on 19th June 2023 by an interventional cardiologist. The length of the migrated piece was 11.5 cm, and no thrombus was observed at the tip (Fig. 1F). No major complication occurred during and after the procedure, and the patient was discharged on 20th June 2023. This is a unique case because spontaneous breakage of venous access devices and cardiac migration after IJV placement is extremely rare, and patients are usually symptomatic. High-pressure infusions for de-obstruction of the catheter or direct catheter injury by guide wire or needle at the time of insertion are likely other causes of catheter fracture.

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