Case Report

An Unusual Complication of Portacath in a Patient of Cystic Fibrosis

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This case report pertains to an unusual complication in a 7-year-old boy with cystic fibrosis who had a portacath inserted for long-term intravenous access. We also discuss the management and put forward suggestions to avoid such a complication.

Keywords: Cystic Fibrosis; Portacath.

Portacaths have been introduced over the past few years in patients who require long- term venous access especially those with cystic fibrosis. These are more permanent than the usual intravenous lines and the rate of complications is considerably less[1]. It has reduced the anxiety[2] as well as trauma[3] associated with long-term chemotherapy.

The main drawback is that it has to be surgically sited. Portacaths have enabled patients with cystic fibrosis (or their parents) to self manage the venous lines and inject antibiotics. This has greatly cut down on the number of hospital visits and in-patient stay. The patient can remain mobile despite being on antibiotics[4]. Despite its benefits a variety of complications of this device have been reported. We report a complication that to our knowledge has not been reported before.

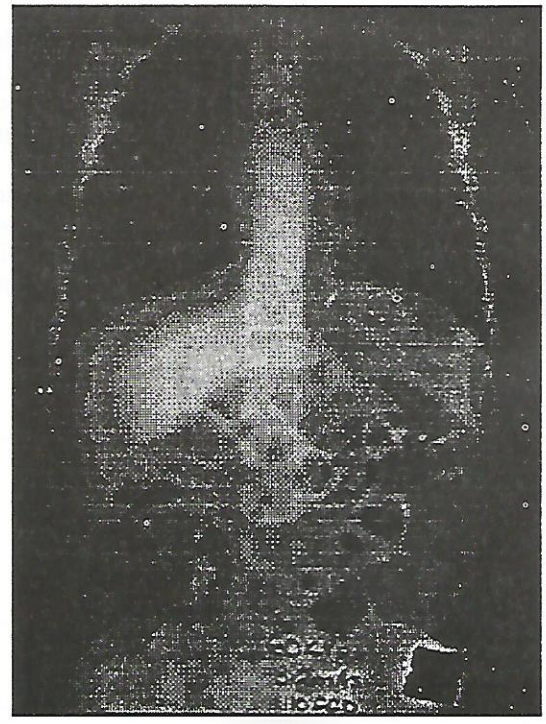
Case report

A 7-year-old boy suffering from Cystic Fibrosis was referred to the Department of Vascular Surgery for replacement of a portacath (Port-A-Cath Low Profile Venous System by Deltec, SIMS, U.S.A). The patient was first diagnosed as having Cystic Fibrosis at the age of 11 months. He was found to be homozygous for delta F-508 mutation. During the course of his treatment he developed heavy colonisation of his lungs with Pseudomonas Aeruginosa. Since then the patient has been on antibiotics on and off. A portacath was placed in the right side of the chest in December 97, providing venous access to the subclavian vein. The portacath had been functioning well till August 00. It was found at the time that free flow of antibiotics was not possible. Fluoroscopic examination showed extravasation of the contrast near the portacath.

In October 00, we attempted to remove and replace the portacath under general anaesthesia. A 3 cm incision was made and the portacath identified at the site. On mobilising the port of the portacath only a 5 mm portion of the catheter was found attached to the port without any trace of the catheter. A fibrous tract was found leading deep towards the right subclavian vein. This was followed for a short distance but still no signs of the catheter were found. A peroperative image intensifier examination showed the fractured distal part of portacath to be residing in the heart. A chest X-ray was done at the same time confirming the findings.

The regional paediatric hospital was contacted to snare out the detached catheter with the help of interventional vascular radiologist.

A repeat screening confirmed the migrated catheter to be located in the heart with one end in the right atrium and the other end in the right pulmonary artery. A gooseneck catheter was introduced from the right femoral vein. It proved impossible to snare the atrial end of the catheter. Therefore the snare was advanced into the right pulmonary artery and the distal end was snared. The catheter was removed through the 8-F sheath in the groin. The patient showed an uneventful post procedure recovery and was discharged the next day.



Discussion

The utilisation of portacath for a long- term venous access has improved the quality of life in patients of Cystic Fibrosis[5]. In spite of its numerous advantages over conventional intravenous access, a few complications have

been reported. These include bacteraemia, fungal infection and blockage by clot formation[6].

In only one study, the complication of portacath breakage has been reported in a single patient after subcutaneous portacath placement[7]. We have not come across a case of fracture of the portacath catheter lodging itself into the heart. With improvement of interventional techniques, most of these catheters can be retrieved radiologically.

Conclusion

Portacath has been shown to be safe for I.V access, but complications do occur. Although the above-mentioned complication seems to be rare, we suggest that it should be borne in mind in long-term portacaths. A 6 monthly monitoring of portacath integrity may be advisable. A possibility of design flaw should also be considered and steps taken to improve it.

References

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