



VENOUS CANNULA AS A FOREIGN BODY IN CEPHALIC VEIN A CASE REPORT AND PROPOSED MANAGEMENT GUIDELINES

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Abstract

Iatrogenic foreign bodies (FB) accidentally getting lodged in various parts of the human body are come across often in medical practice. This causes anxiety to the patients, the doctors and nurses alike for various reasons. Many such instances cannot be reported in literature! We report an instance where an intra venous cannula (Venflon) got within the cephalic vein of forearm due to a weird cause. We successfully retrieved it.

Key words: (intravenous cannula, cephalic vein, venotomy, iatrogenic)

Case Report



Figure 1 Vein with FB exposed



Figure 2 Venotomy done FB pulled out

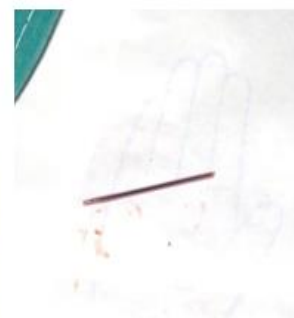


Figure 3 FB –venous cannula

A 35-year-old gentleman was admitted to a hospital for intravenous antibiotics as treatment of cellulitis in lower limb. The ward nurse inserted a 20G Venflon in the cephalic vein in the right forearm. After it was in place nicely, she closed it with the Luer lock and wanted to shave off the nearby skin before affixing plaster. As the patient suddenly jerked, the cannula got cut distal to the bushing. The nurse could not do much; she applied a Gamgee pad and a bandage. The surgeon was called. We examined the patient. The cannula could be felt under the skin. Under field block and with proper aseptic precaution and with an assistant maintaining proximal compression on the vein a

longitudinal incision was placed right over the vein. After proximal control of the vein, the vein with cannula in situ was hooked out with an artery forceps. Venotomy was made with a 11 blade.

The cannula was seen and grabbed with a mosquito artery forceps and gently pulled out in full (Fig 1, 2 and 3). The vein was ligated in-continuity proximal and distal to the venotomy site with 3-0 vicryl. After confirming that there was no ooze, the incision was closed with sub-cuticular 3-0 vicryl.

Discussion

Venous Cannulae (Venflon) are very frequently used in clinical practice. Its invention is a boon to medical field; this has made intravenous access very easy. After the advent of this invention, “venous cut-downs” for shocked patients, burns patients etc are almost forgotten. The various parts of the Venflon is illustrated in the Fig4. The cannulae can be kept in situ for a few days, particularly so if heparin flushes are used.

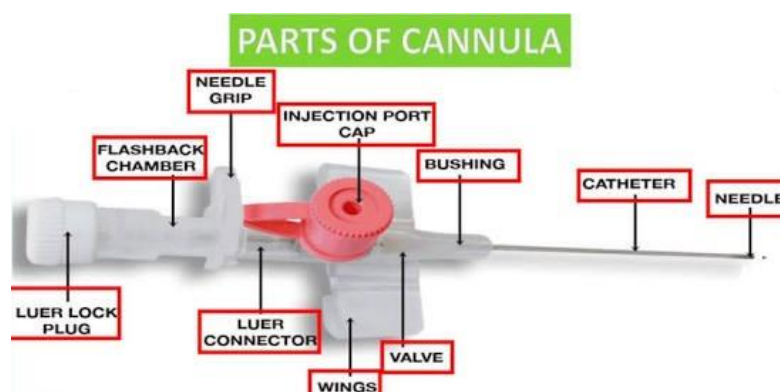


Figure 4 venous cannula

Venous cannulae forming foreign bodies are reported more commonly with central venous cannulations than in peripheral veins ⁽¹⁾. When these incidents do occur in peripheral veins, many factors are blamed. These factors are 1. repeated punctures with same cannula causing damage to cannula and its fracture, 2. long duration of placement in veins or 3. poor quality of the product ⁽²⁾. Whatever may be the reason, such foreign bodies in peripheral veins may cause various complications, some of which may be life-threatening. They include thrombophlebitis ⁽³⁾, abscess, embolism, cardiac damage, hemopericardium ⁽⁴⁾, sepsis and fatality ⁽⁴⁾. Sometimes the venous cannula FB may move distally also ⁽⁵⁾.

Our case is a peculiar and weird one. It occurred due to attempted shaving of the skin to affix ‘vasofix’. Once the accident has happened what is the further course of action? Though there are no guidelines in the literature in this regard we go by common sense and science.

We suggest the following guidelines:

Embolization of the foreign body into the proximal vein is the concern. Though a proximal light tourniquet may prevent the foreign body from moving, the same will cause venous overfilling and this will make the FB float and ready to embolise when the tourniquet is released. A compression of that particular vein segment with a Gamgee pad and an Elastoplast would suffice. The FB and the venous stasis may favour thrombosis locally and immobilise the FB. The movement of the limb can be limited with a cuff and collar. The flexion or hyperflexion of the elbow may impede the migration of the FB to the elbow. The cannula may not be radio opaque. Simple high frequency ultra-sonogram will locate the cannula if it had moved upto brachial vein ⁽³⁾. If it had entered the SVC or heart then CT scan or Echo cardiogram may be needed. Early removal of the cannula is warranted. During the operative procedure, it is advisable to ligate the vein proximally to prevent antegrade migration, before the vein is dissected and opened.

Conclusion

Intra venous foreign bodies are mostly iatrogenic. The medical professional will stand to be sued if an instance occurs. The situation has to be handled with care, compassion and diplomacy. Early attempt to removal is essential to prevent complications. High frequency ultrasound can help in localising the venous cannula, if palpation and Plain Xray are not helpful.

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