

# Inserting a Cannula that this Common Procedure may have Serious Consequences

Kenji I keda \*

Department of Oral Radiology, Kochi University of Technology, Japan

\*Corresponding author: Kenji I keda, Department of Oral Radiology, Kochi University of Technology, Japan, E-mail: Kenkeda@hotmail.com

**Received date:** September 01, 2022, Manuscript No. IPJVES-22-14963; **Editor assigned date:** September 04, 2022, PreQC No. IPJVES-22-14963 (PQ); **Reviewed date:** September 15, 2022, QC No. IPJVES-22-14963; **Revised date:** September 25, 2022, Manuscript No. IPJVES-22-14963 (R); **Published date:** September 30, 2022, DOI: 10.36648/J Vasc Endovasc Therapy.7.9.120

**Citation:** Keda KI (2022) Inserting a Cannula that this Common Procedure may have Serious Consequences. J Vasc Endovasc Therapy: Vol.7 No.9: 120

## Description

Anatomy is taught during all undergraduate medical curricula and therefore all doctors inserting cannulas should be well aware of the proximity of the brachial artery to the veins in the antecubital fossa. However, the standard and extent of anatomy teaching can vary widely between different medical schools. A recent study found that although 85% of final year medical students feel that sound anatomical knowledge is vital for the Foundation Doctor, only 50% ranked their own competence as adequate [6]. It is not only doctors who are responsible for cannulation. This is performed by a wide variety of staff including healthcare assistants, and their training is less regulated and less standardised. This is not to say that cannulation should only be performed by a doctor or registered nurse, rather than any cannulation training should include an overview of relevant local anatomy. The main lesson from this case is to remind all practitioners who might be inserting a cannula that this common procedure may have serious consequences. Although this is a rare complication it is a dangerous one. A good grasp of the local anatomy along with a sensible explanation of the procedure to the patient is essential to try and avoid situations such as this in the future.

## Chest Infection

The majority of iatrogenic pseudoaneurysms are in the groin, secondary to percutaneous interventions, but management options are the same for any location. These options are compression under ultrasound guidance, injection of thrombin, coil embolization or surgical repair. Compression alone does not have as good success rates as thrombin injection and is time-consuming and uncomfortable for the patient. In lower extremity pseudoaneurysm the success rate post thrombin injection has been reported at 96-100% and it is recommended by the National Institute for Health and Clinical Excellence as first line treatment. Initially an attempt was made at thrombin injection in this case. A Duplex showed that the aneurysm was successfully thrombosed and there was no filling seen post procedure, however on followup ultrasound one week later the pseudoaneurysm was once again patent. A potential reason for failure of thrombin injection is the large size of this pseudoaneurysm (37 mm AP diameter) and that the patient was

fully anticoagulated. A lot of the literature has focused on injection into smaller pseudoaneurysms and so less is known about the efficacy of thrombin injection in larger size aneurysms. When the patient was reviewed she reported some pain in the right arm, and there was some compression of the distal radial artery by the pseudoaneurysm. Definitive management was proposed, in the form of surgical repair. This was initially delayed due to the patient developing a chest infection but was carried out successfully 3 weeks after initial presentation. The aneurysm sac was opened and a small defect in the arterial wall repaired. She recovered well after the operation and was discharged home the following day.

## Patient Developed Lymphoedema

Consent is usually verbal at most and is very rarely fully informed. The potential consequences of a poorly placed cannula can be enormous. In this case, the patient had to endure almost a month of pain and uncertainty, followed by an open operation and an inpatient admission. After it was diagnosed as a pseudoaneurysm she was very concerned that it could rupture and lead to extensive bleeding, which may well have been catastrophic due to her anticoagulation. By the time of operation the pseudoaneurysm had grown in size and was beginning to compress the distal artery although blood flow was preserved. Further consequences such as limb loss were also possible. Pseudoaneurysm is not the only potential complication of cannulation. Another recent case highlighted the importance of valid, informed consent after a patient developed lymphoedema after cannula insertion. In this case the patient actually refused consent for the cannula, adding another element to the interaction. The doctor was initially found not guilty of negligence but this was reversed on appeal, and he was found guilty. Although this is an extreme example it is important as the doctor felt he was following policy and acting in her best interests.

Initially an attempt was made at thrombin injection in this case. A Duplex showed that the aneurysm was successfully thrombosed and there was no filling seen post procedure, however on followup ultrasound one week later the pseudoaneurysm was once again patent. A potential reason for failure of thrombin injection is the large size of this

pseudoaneurysm (37 mm AP diameter) and that the patient was fully anticoagulated. A lot of the literature has focused on injection into smaller pseudoaneurysms and so less is known about the efficacy of thrombin injection in larger size aneurysms