



# The buttonhole technique in an immunosuppressed patient - A case report

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## Introduction

In our centre, selection of the right cannulation technique is based on whether the arteriovenous fistula (AVF) can be used.

## Objectives

To present our experiences using the buttonhole technique for every new AVF to reduce the patient's fear. As compared to other techniques, it causes less pain and may reduce complications.

## Methods and Results

A 24-year old patient was diagnosed with hypertension several years ago. He stopped taking his medicine after two months, because he thought that his blood pressure has returned to normal.

In April 2016, he was hospitalised due to therapy-resistant pneumonia. His blood results showed a creatinine level of 1,200 $\mu$ mol/l, anaemia, oliguria, subsequent oedema, and haemoptysis. We started haemodialysis through an acute catheter and transferred him to another hospital with suspected vasculitis. He received immunosuppressive therapy. In June, his AVF was created. After appropriate maturation, we applied the buttonhole technique. We placed great emphasis on patient education and protection of AVF.

Both nurses and patient strictly adhered to all hygiene rules and nurses performed cannulation technique in accordance with the protocol. In December, the puncture site of the arterial side became sensitive without any signs of redness and complications. After a few days, the puncture site became hyperaemic and an abscess formed. The patient was admitted due to signs of inflammation.

The abscess ruptured spontaneously requiring surgery.

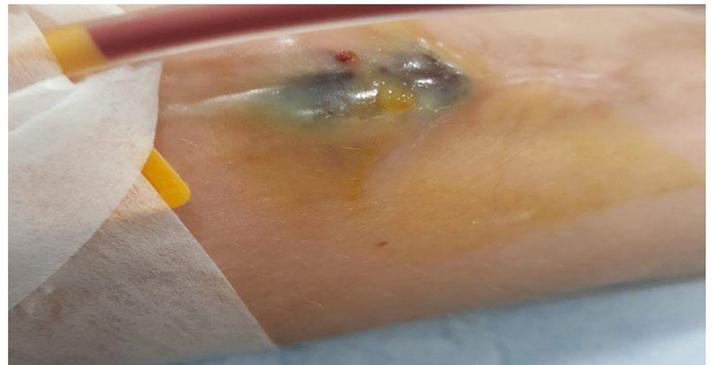


Figure 1. Before rupture



Figure 2. After rupture

## Conclusion

Upon selection of the appropriate cannulation technique, we should consider all medical treatments. Early detection of potential complications is important as well as rapid intervention. Immunosuppression can lead to an increased occurrence of infections even in case of high-level care and observance of all the hygiene rules.

## References

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2. [Vascular Access Cannulation and Care](#). A Nursing Best Practice Guide for Arteriovenous Fistula Second Edition – Sept 2015. ISBN: 978-84-617-0567-2