Nawaf Alogayyel
Raheef Alatassi
Saeed Koaban

A Z 51854

A forgotten retained drain inside a knee for 10 years

Security Forces Hospital
Orthopedic Surgery
Riyadh-Saudi Arabia

Introduction

Inserting a surgical drain into the wound after an arthroscopic procedure in the knee is mainly to decrease post-surgical fluid collection. which is a culture media for bacteria. The use of postoperative surgical drains remains controversial and has advantages and complications.

Although there are no specific and scientific recommendations on when to remove a drain, it is gener-ally extracted in the first few postoperative days. Removal is usually a simple procedure that is done at bedside via a simple pulling mechanism.

A retained and broken drain during removal is very rare, easily overlooked, and avoidable but can lead to serious complications and non-preferable sequences. Moreover, lifting it inside the joint will increase the risk of neurovascular injury, irritating pain,and infection; another surgery with all of its complications may be necessary to remove it.

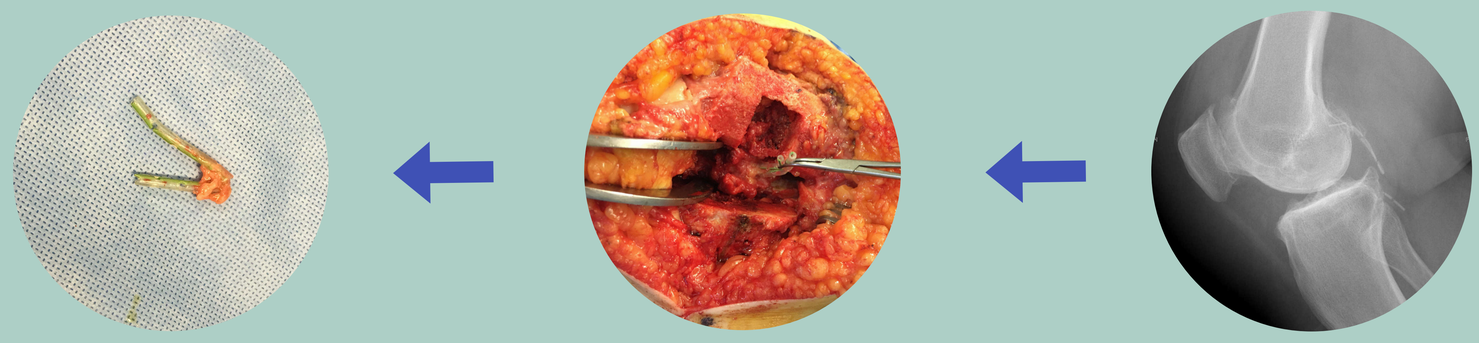
After an extensive review of the literature about retained drains, we found only few cases in orthopedics specifically. Herein we present a rare case of a forgotten retained broken drain that was inside a knee joint for a very long time.

Presentation of case

A healthy 56-year-old female presented to our outpatient clinic complaining of bilateral knee pain and was diagnosed with bilateral knee O.A. She had undergone right knee arthroscopy 9 years prior for debris removal to alleviate the pain of osteoarthritis but her knee never felt better after the procedure.

She underwent a right TKR to address right knee osteoarthritis. During the arthroplasty procedure, after the femur and tibia were cut, we noticed an abnormal elongated structure inside the knee just posterior to the femur and extending down to the tibia.
It was a remnant drain from the previous surgery 10 years prior.

It was stuck between tissues with no neurovascular compromise and no sign of surrounding infection.
The drain was removed and sent for a culture and sensitivity analysis.
The patient's postoperative course was unremarkable.



Discussion

Discovering a retained drain is a rare and preventable complication that can be stressful for both the patient and surgeon. Only a few cases have been reported thus far, possibly due to an increase in the awareness of **legal implications and medical litigation**.

Most surgeons support surgical removal of the drain; however, This places the patient at risk of anesthesia and surgery. Moreover, there has been **no orthopedic research** supporting the removal of a retained drain until the present. Furthermore, no reviews in the orthopedic literature have reported any adverse events related to these drains.

Until recently, there have been no clear explanations for drain breakage inside the body, but several possible causes have been identified, such as stretching of the drain by uncoiling, the distribution of the perforations, the perforation manufacturing method,maintaining the drain at a high negative pressure causing its adherence to the tissues, or if a suture passed through the perforation. Sometimes no clear reason or cause can be found **to explain the breakage.**

Conclusion

There are several preventive measures to prevent retained surgical drains:

- **The angle of the drain is not excessively acute.**
- **The surgeon should be cautious not to stitch the drain within the soft tissue.**
- **Drains should be measured & inspected upon removal.**

Conflict of interest

No specific grant from funding agencies in the public, commercial, or not for-profit sectors was received for this work.

References

[1] S. Jaafar, J. Vigdorchik, D.C. Markel, Drain technique in elective total jointarthroplasty, Orthopedics 37 (1) (2014) 37–39.
[2] R.J. Gaines, R.P. Dunbar, The use of surgical drains in orthopedics, Orthopedics31 (7) (2008).
[3] S.W. Ho, I.T. Chua, A rare case of a blood clot masquerading as a retainedsurgical drain, Ann. Transl. Med. 4 (23) (2016)..

AlogayyelNa@gmail.com
w.6f@hotmail.com

9th International Conference on Clinical & Medical Case Reports