

Broken grasping forceps in during knee arthroscopy: a case report

Abstract

Broken instruments during arthroscopy can be a very disastrous complication during arthroscopic surgery... This is because of difficulty in extraction within the narrow confines of the knee joint. Arthroscopic surgery is a relatively safe procedure with few complications. The incidence of broken forceps is even rarer. We look at a case of a young footballer who was undergoing meniscectomy joint debridement and arthroscopic wash out. The grasping forceps got broken during the procedure and required an arthrotomy to remove. He eventually had an arthrotomy to remove the broken instrument and recovery was uneventful. The arthroscopic surgeon needs to be aware of this complication and have in his armamentarium various techniques for handling this.

Keywords: arthroscopy, broken forceps, knee

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Introduction

Arthroscopy is a very rewarding procedure. It has revolutionised the treatment of Joint injuries in particular knee. It is a safe procedure with a relatively low complication Rate.^{1,2} Instrument failure is even rarer than most other complications.^{1,2} There have been several reports of broken arthroscopic instruments in the joint and various methods of removing them.²⁻⁵ To the best of our knowledge there have been no reports of this in Nigeria. We present a case of broken grasping forceps which happened during an arthroscopic meniscectomy. We decided to present this to highlight the problems involved in managing this complication. As the popularity and use of arthroscopy for knee pathology increases within the orthopaedic community, the incidence of instrument failure is likely to increase. Therefore, a systematic protocol for visualization, and retrieval should be part of every arthroscopist's armamentarium. Additionally, care must be taken during the creation of portals, particularly when resistance is encountered. All instruments should be examined carefully when removed from the knee joint.

Case report

E.G a 28year old footballer presented with a 3 years history of recurrent left knee joint pain and locking. He sustained a closed injury to the left knee joint while playing football. He has had several treatment including traditional interventions, injection of intra articular steroids. On examination the main findings was wasting of quadriceps. No swelling hypo pigmentation of skin over posteromedial Joint line with tenderness over same area. Lachmans test was negative, valgus and varus stress test negative. Plain radiographs showed early signs of osteoarthritis with joint space narrowing and medial osteophytes MRI Showed medial mensical injury. He was counseled on the problems and worked up for arthroscopic debridement and medial meniscectomy. At operation the findings where extensive synovitis in all compartments. There was an oblique tear of posterior horn medial meniscus which had formed a nodule. There was a chondral defect out bridge type 2 over the medial femoral condyle overlying the meniscal nodule areas of cartilage defect in medial and lateral femoral condyles. Using a shaver most of synovium disturbing vision was removed and meniscectomy commenced using basket forceps. A grasper got broken in the joint during attempt at grasping the loose meniscus Fluid

intake was stopped and several attempts made to remove the piece of forceps. But it eventually went out of sight. An X ray was done to confirm location of the object in the lateral compartment and a medial mini arthrotomy done to remove the foreign body. The arthroscope was still utilized to remove the instrument which was located in the lateral compartment of the joint under the lateral meniscus. The rest of the procedure was then completed. The arthrotomy closed and the joint irrigated with 2 liters of normal saline. Physiotherapy was started immediately and recovery was uneventful. At 6 months follow up patient has recommenced playing with his football team (Figure 1).

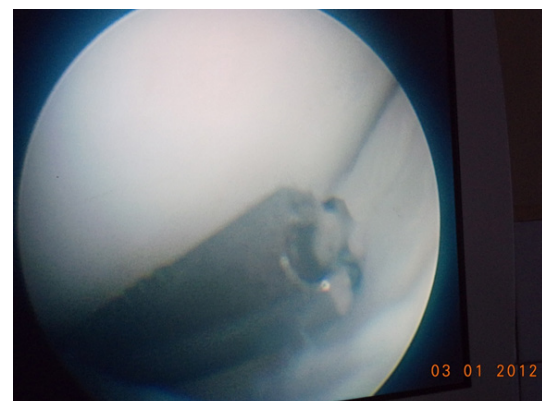


Figure 1 Broken forceps in situ.

Discussion

A broken instrument in the joint can be one of the most frustrating events during an arthroscopic procedure. The causes could be due to poor quality instruments, inappropriate use of instruments, operating in a tight joint.⁵⁻⁷ There are many methods for removal of broken instruments including magnetic tip probe, grasping it with forceps and an arthrotomy.⁶ The technique utilized depends on the resources available and experience of the surgeon. We did not have a magnetic probe but had another grasping forceps which was not able to grab the broken instruments properly. We had to resort to a medial parapatellar arthrotomy to remove the broken instrument. The lesson here is to always have all necessary tools for removal of broken instrument. If a proper diagnostic arthroscopy was done immediately the object

became difficult to see we would have identified the forceps tip in the lateral compartment and an arthrotomy may not have been necessary. Although the patient became unstable during the procedure and this added some urgency to remove conclude the procedure. The surgeon should inspect the instrument before any case. There should be no compromise on quality of instruments purchased. The broken instrument could have been left in the joint as some authors have suggested,^{7,8} but the size in this case precluded that option. It could be a source of further irritation and articular damage hence the need to remove it by all means.

Conclusion

A broken instrument is a rare complication of arthroscopic procedures. A high level of awareness of possible causes and being prepared will go a long way in preventing and treating this complication.

References

1. Small NC. Complications in arthroscopic surgery performed by experienced arthroscopists. *Arthroscopy*. 1988;4(3):215–221.
2. Sherman OH, Fox JM, Snyder SJ, et al. Arthroscopy—"no-problem surgery". An analysis of complications in two thousand six hundred and forty cases. *J Bone Joint Surg Am*. 1986;68(2):256–265.
3. In Y, Bahk WJ, Park JB. Detachment of the tip of a motorized shaver within the knee joint: a complication of arthroscopic surgery. *Arthroscopy*. 2003;19(6):E25–E27.
4. Oldenburg M, Mueller RT. Intra-articular foreign body after arthroscopy. *Arthroscopy*. 2003;19(9):1012–1014.
5. Oztekin HH. An unusual complication of knee arthroscopy: an extra-articular migrated asymptomatic broken probe from the knee joint. *Arch Orthop Trauma Surg*. 2005;125(4):285–287.
6. Carlsen A. A broken telescope: a complication of arthroscopy. *Arthroscopy*. 1986;2(3):182–183.
7. Gruson, Konrad I, Ilalov K, et al. A broken scalpel blade tip: an unusual complication of knee arthroscopy Bulletin of the NYU Hospital for Joint Diseases. 2008;66(1):54–56.
8. Yewlett A, Bhattacharjee A, Mehta H, et al. A Technique To Retrieve A Broken Probe During Shoulder Arthroscopy: A technical tip. *The Internet Journal of Orthopedic Surgery*. 2014;22(1).