JOURNAL OF CASE REPORTS 2016;6(2):191-194

# Retained Artery Forceps that Migrated into the Large Intestine

**Afeyodion Akhator**
Department of Surgery, Faculty of Clinical Medicine, College of Health Sciences, Delta State University, PMB 1, Abraka, Nigeria.

***Abstract:***

Retained foreign bodies are medical mistakes that absolutely should not occur. The articles left behind range from surgical gauze to artery forceps. These articles occasionally erode into the lumen of the intestine causing either intestinal obstruction or enteric fistula. The author presents a case of intraluminal migration of a retained artery forceps in an elderly woman who had myomectomy ten years prior to presentation. The author suggests possible mechanism of the intraluminal migration and simple methods to prevent the unintentional retention of surgical articles.

***Key words:*** Fistula, Foreign Bodies, Intestinal Obstruction, Surgical Instruments, Uterine Myomectomy.

## Introduction

Retained foreign bodies are considered are 'Surgical Never' events: medical mistakes that absolutely should not occur [1]. The incidence is usually underestimated because of reluctance to admit to errors and the accompanying legal challenges [2]. The incidence has been put at between 1 in 1,000 to 1,500 operations, and no surgery or specialty is exempt [3].

The gauze sponge, because of its size and amorphous nature, is the commonest article left behind [4]. Other instruments left behind after surgery include artery forceps, broken instruments, needles, abdominal mops and rubber tubes. The clinical presentation varies from an acute to chronic presentation, from a few weeks to 20 years [3]. These retained articles occasionally migrate completely into the bowel lumen usually leading to intestinal obstruction [5].

A case of a retained artery forceps that migrated into the right colon in an elderly lady from a myomectomy done 10 years previously is presented.

## Case Report

Mrs DC is a 58 year old woman who presented at Delta State University Teaching Hospital in 2012 with a 10 year history of foul smelling discharge from an anterior abdominal wound. She had myomectomy in a peripheral hospital and the operation wound did not completely heal. This was accompanied with recurrent abdominal pain. She

**Corresponding Author: Dr. Afeyodion Akhator**
Email: doc_akhator@yahoo.com
**Received:** Octoer 14, 2015 | **Accepted:** March 18, 2016 | **Published Online:** May 5, 2016

**Conflict of interest:** None declared | **Source of funding:** Nil | **DOI:** http://dx.doi.org/10.17659/01.2016.0047

had been seen in several other hospitals and has had 3 other surgeries but each time the wound breaks down and starts draining foul smelling fluid. She was then referred to us as a case of enterocutaneous fistula.

On examination, the patient was a healthy middle aged woman who was well nourished, not pale, anicteric and afebrile. The abdomen was full, with a midline widened scar with two draining sinuses just above and below the umbilicus. The drainage was seropurulent and foul smelling. There was mild tenderness in the lower abdomen. Other examinations were essentially normal. An assessment of retained intra-abdominal swab was entertained.

The patient was requested to do abdominal CT scan, the findings was a retained artery forceps [Fig.1]. Other routine investigations were normal. She had laparotomy done and the findings at surgery were a contracted right colon, from the terminal ileum to the proximal transverse colon with associated dense adhesions. There was an artery forceps within the lumen of the contracted colon [Fig.2]. There was no fistula tract. A right hemicolectomy and ileotransverse anastomosis was done for her. The widened scar and sinuses were excised, and she had delayed primary closure of her wound. Her recovery was uneventful; she was discharged home 2 weeks after the surgery. She had been followed up for 2 years with no recurrence of abdominal pain or discharge.

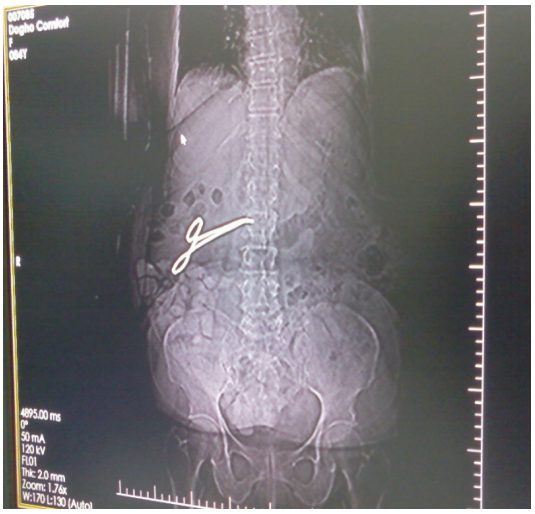

**Fig.1:** CT scan showing retained artery forceps.

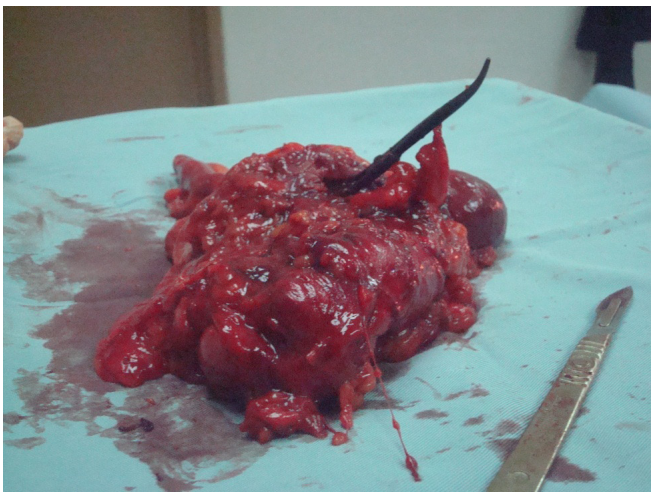

**Fig.2:** Artery forceps within the resected colon.

## Discussion

The surgical gauze is the commonest surgical object left behind, this is because of its common usage, amorphous nature and small size [6], the incidence of retained artery forceps is rarer. Wang *et al*. gave a concise review of the gastrointestinal complications of these retained objects in the abdomen [7]; these complications include nonspecific abdominal pain, intestinal obstruction, external extrusion of the foreign object, abscess formation, internal and external fistulation and intestinal obstruction and this patient presented with abdominal pain and fistula.

There are reports of retained artery forceps causing intestinal obstruction [8] and internal fistulation [9], but reports of intraluminal migration of retained foreign body has always mentioned

the surgical gauze [5,7]. This patient is likely the first case to have had intraluminal migration of the retained artery forceps. It is the author's opinion that the mechanical forces exerted by the retained artery forceps on the colon might have eroded the colonic wall causing a low output enteric fistula and further erosion and migration led to complete intraluminal migration of the artery forceps with subsequent healing of the fistula track, leaving only the subcutaneous sinuses.

The patient's primary complaints of abdominal pain and failure of the surgical wound to heal started with the first surgery done 10 years before presentation and this is likely the time the artery forceps was retained. Metallic instruments usually presents acutely, unlike sponges whose presentation might be delayed for months or years [10]. The other three surgeries were likely wound exploration or drainage of abscess. What was impressive was that nobody ever thought of doing plain abdominal X-ray or abdominal ultrasound scan which could have revealed the artery forceps and she would have gotten help earlier.

Unintentionally leaving an object behind is a nightmare for all surgeons and all efforts must be made to prevent its occurrence. While in more developed countries standardized protocols and availability of sophisticated equipment are available to help prevent its occurrence [11,12]. In resource limited countries where manpower and equipment are limited, the surgical count and four quadrant exploration are the only available options. While a correct surgical count may not necessarily translate to 'nothing left behind' [13], it can alert the operating team to do a thorough four quadrant exploration. The author also advises limiting the number of instruments in the operating field, return all instruments not in immediate use to the scrub nurse (or back to the trolley where there is no scrub nurse), immediately discard all blood stained gauze and abdominal sponges and not to use gauze when the abdominal cavity is opened.

## Conclusion

Retained foreign bodies cause undue morbidity to the patient and all members of the operating team must be vigilant to prevent it. Also, any patient presenting with abdominal symptoms after surgery should be investigated thoroughly with this possibility in mind.

## References


1. Zahiri HR, Stromberg J, Skupsky H, Knepp EK, Folstein M, Silverman R, *et al*. Prevention of 3 "never events" in the operating room: fires, gossypiboma, and wrong-site surgery. Surg Innov. 2011;18(1):55-60.
2. Garg M, Aggarwal AD. A Review of Medicolegal Consequences of Gossypiboma. J. Indian Acad Forensic Med. 2010;32(4):358-361.
3. Hyslop JW, Maull KI. Natural history of retained surgical sponge. South Med J. 1982; *75*(6):657-660.
4. Gawande AA, Studdert DM, Orav JE, Brenna TA, Zinner MJ. Risk factors for Retained insruments and sponges after surgery. N Engl J Med. 2003;348(3):229-235.
5. Rafie BA, Abu Hamdan OJ, Trengganu NS. Intraluminal migration of retained surgical sponge as a case of intestinal obstruction. JSCR 2013;5.
6. Lincourt AE, Harrell A, Cristiano J, Sechrist C, Kercher K, Heniford BT. Retained foreign bodies after surgery. J Surg. 2007;138:170-174.
7. Wang CF, Cipolla J, Seaman MJ, Lindsey DE, Stawicks SP. Gastrointestinal complications related to retained surgical foreign bodies (RSFB): A concise review. OPUS 12 Scientist. 2009;3(1):11-18.

8. Ugochukwu AI, Edeh AJ. Retained intra-abdominal artery forceps - An unusual cause of intestinal strangulation. N Am J Med Sci. 2011;3(7):339-343.
9. Popoola AA, Bello JO, Ezeoke GG, Adeshina KT, Fadimu A. Concealed enterovesical fistula associated with forgotten intra-abdominal haemostat and intravesical towel. Case Reports in Urology. 2014;2014 doi: 10.1155/2014/723592.723592
10. Schonleben K, Strobel A, Schonleben F, Hoffmann A. Retained foreign bodies from the surgical point of view. Chirurg. 2007;78:7-12.
11. Rogers A, Jones E, Oleynikov D. Radiofrequency identification (RFID) applied to surgical sponges. Surg Endosc. 2007;21:1235-1237.
12. Fabian CE. Electronic tagging of surgical sponges to prevent their accidental retention. Surgery. 2005;137:298-301.
13. Egorova NN, Moskowitz A, Gelijns A, Weinberg A, Curty J, Rabin-Fastman B, *et al*. Managing the prevention of retained surgical instruments: what is the value of counting? Ann Surg. 2008;247:13-18.