CASE REPORT

Forgotten sanitary pad following episiotomy repair: A Case Report

Tinuade A Oyebode[1], Charles U Anyaka[1], Adewumi Musbau[2]

Abstract

Background-Gossypiboma describes an intraoperative mistake discovered postoperatively where surgical sponges, abdominal pack, gauze packs or textile materials are forgotten in the operative field after the patient is closed. This condition is under reported and poses a diagnostic dilemma because it may be silent for varying durations after the surgery.

Case Presentation-A 23 -year old Para 1+0 pharmacy assistant presented thirty-one months after childbirth to the gynaecology clinic with complaints of dyspareunia, dysmenorrhoea, offensive menstrual effluent and vaginal discharge since her delivery. She had received an episiotomy, which had been repaired and she had been discharged on antibiotics and analgesia. She passed red lochia for three days followed by brown malodorous fluid per vaginam. She experienced severe abdominal pains, high-grade fever, chills and rigors during the puerperium with dyspareunia and foul smelling vaginal discharge subsequently. She visited several hospitals, and received antibiotics, antimalarials and analgesics, but symptoms persisted. On examination, significant findings were suprapubic tenderness, brown malodorous discharge, adnexal tenderness and a mass plugging the cervical os. It was removed and examination revealed a sanitary pad covered in foul-smelling discharge. Symptoms abated but twelve months after, she presented with inability to conceive and was referred for infertility evaluations.

Conclusion- Competent doctors should supervise less experienced colleagues to forestall these gaps which can lead to legal action and maternal morbidity and possibly mortality. Repeat pelvic examinations should be performed after vaginal procedures, and women presenting with abdominal and genital symptoms should receive exhaustive evaluations.

Key words- sanitary pad, gossypiboma, episiotomy, dyspareunia, dysmenorrhoea

Date received: 15 December 2020; accepted: 7 July 2021

Highland Med Res J 2021;21(2):61-65

Introduction

Forgotten foreign bodies are a continual occurrence in surgical practice world over, irrespective of whether or not they are reported. Gossypiboma, described by Wilson in 1881, is the term describing an intraoperative mistake discovered postoperatively where surgical sponges, abdominal pack, gauze, cotton wool pack or other textile material are unintentionally left in the operative field, during a surgery or invasive procedure and the patient is closed, and derives from the Latin word "gossypium" meaning textile or cotton, and the Swahili word "boma" meaning place of concealment.[1] Other terms used include textiloma and gauzoma.[2] Gauze, surgical instruments or other items left behind in patients' bodies occur more frequently than are reported and the exact incidence of left behind items remains unknown, and gossypibomas are commonly found in the abdomen (56%), pelvis (18%), and thorax (11%).[3]

The exact incidence is unknown as wide under reporting is suspected worldwide, but published evidence places the incidents between 1/7000 to 1/100 surgical procedures and estimates of 1500-2000 retained surgical item cases a year in the United States, and incidences are linked to decreased patient satisfaction survey scores.[4] Healthcare personnel can forget to remove textile material or instruments during complicated, extended, or emergency surgery. Changes in the operating team, including shift changes, can influence occurrences of such errors.[5] There are very sparse reports of those forgotten in the genital tract. Two cases of intra-abdominal gossypiboma were reported in Abuja, Nigeria. One presented with an intra-peritoneal abscess and fistula necessitating a two-staged bowel resection and colostomy then closure, while the other simulated an intraluminal colonic tumor with sub-acute intestinal obstruction.[6] They were re-operated and recovered but both cases ended up in court.

The standard of care to prevent these occurrences would include skilled health workers performing procedures, proper supervision of younger health workers, adequate manpower to avoid errors from exhaustion, counting and hand over of all surgical sponges during intraoperative shift changes, repeat pelvic examination after genital tract procedures and exhaustive evaluation of gynaecological symptoms. These retained materials become a focus for infection, morbidity, possible mortality and potential medico-legal cases if patients sue for malpractice.[7]

The practice of Obstetrics in low resource settings is challenged by several issues including lack of adequate working materials and medical supplies, dearth of skilled

[1]Department of Obstetrics and Gynaecology, University of Jos/Jos University Teaching Hospital, Jos [2]New Crescent Hospital, Jos

All correspondences to:
Tinuade A Oyebode
Email: tinuadeoyebode@yahoo.com

health workers, training gaps in maternity delivery services among others. Health systems, which mediate outcomes of illness and determine health outcomes, are weak in Nigeria, and challenges include the absence of appropriate materials and protocols.[8] In practice, during episiotomy repair, perineal pads are utilized commonly by health workers for plugging the cervix to reduce bleeding from the uterine cavity into the operation field for improvement of visibility during episiotomy repairs, especially when availability of light and appropriate instruments are suboptimal. This will help create a bloodless operation field and improve visibility for identifying the apex and margins of the incision for ease of repair. However, forgotten sanitary pads and the resulting major acute and chronic sequelae including severe infection are becoming a cause of increased morbidity, mortality and near miss from immediate complications like septicaemia, pelvic abscess, peritonitis, and their implications, while long-term complications include ectopic pregnancy, tubal blockade, secondary amenorrhoea, secondary infertility and chronic pelvic pain increase morbidity.[9] It is important to be aware of this incidence to help health workers exercise more caution and thoroughness in preventing their occurrence and identifying them when they occur.

Case Presentation

Mrs. DJ, a 23 -year old Para 1+0 Community Health Extension Worker who worked as a pharmacy assistant presented at New Crescent Hospital, Jos, Plateau State. Her only childbirth had been 2 years and seven months (thirty-one months) before this presentation.

She complained of severe episodes of deep dyspareunia and discharge of offensive brown effluent during acts of coitus which commenced when she resumed coitus with her husband six weeks after delivery. Prior to that, she had noticed several episodes of severe lower abdominal pain, passage of scanty red lochia for 3 days post delivery, after which she passed foul-smelling, brown fluid per vaginam. There were several episodes of fever, chills, rigors and painful haemorrhoids. She resumed her menstrual periods seven months after delivery, but periods were scanty, discoloured, malodorous and associated with severe dysmenorrhea.

She consulted five different health centers on various occasions for her symptoms with no improvement. On each visit she was given prescriptions of antibiotics and analgesics, but her symptoms worsened and became associated with lower abdominal and lower back pain. This apparently constituted a diagnostic dilemma to the health workers but no health provider at any time performed a pelvic examination and none had requested any form of investigation at any visit. She also desired to have another child but had been unable to conceive Her only pregnancy and labour had been uneventful. However, she received an episiotomy during delivery, bled excessively, and controlling the bleeding was challenging and the episiotomy repair was associated with difficulty with keeping her legs in stirrups. She was placed on antibiotics and analgesia for one week and discharged home the following day.

On examination, she was an anxious young woman who was afebrile, not pale nor jaundiced with no pedal oedema. Her pulse rate was 92 beats per minute, blood pressure was 130/80mmHg and heart sounds were normal. Her breasts were normal and there were no lumps. The respiratory and central nervous system were normal.

The abdomen was flat, moved with respiration with suprapubic tenderness but no palpable abdominal or pelvic mass. On pelvic examination the introitus were smeared with markedly offensive brown discharge. The introitus had a left mediolateral episiotomy scar that had healed by secondary intention. Speculum examination was markedly uncomfortable and revealed same brown discharge in the posterior fornix. The cervical os was seen to be plugged with a brown mass extruding from within the uterine cavity and further inspection revealed it was a foreign body. Bimanual examination was tender; the uterus was retroverted and twelve weeks pregnancy size. There was bilateral adnexeal tenderness but no masses. Examining fingers were insinuated around the mass and it dislodged and was removed with minimal efforts. It was examined and found to be a wrapped sanitary pad covered in malodorous altered blood. A repeat vaginal examination done to ascertain presence of other materials, injuries or bleeding yielded nothing abnormal.

Ultrasound scan was performed after the removal of the pad and revealed an empty uterus. High vaginal/ endocervical swab, and urine microscopy, culture and sensitivity and full blood count results were normal.

Mrs. DJ received broad spectrum antibiotics (Doxycycline and Metronidazole). She had several follow-up visits to the gynaecological clinics. Her menstrual effluent progressively normalized in coloration and became less malodourous, but dysmenorrhoea persisted. Dyspareunia did not disappear but improved. She continued experiencing chronic lower back pain, and inability to achieve pregnancy despite regular unprotected coitus. She was counselled to have a pap smear, and was referred to the infertility clinic for further evaluations, but complained of financial constraints.

Discussion

Gossypibomas are majorly found in the abdominal cavity (56%), pelvis (18%), and 11% in the thorax.[3] There are hardly any reports of sanitary pads forgotten within

the genital for prolonged periods of time, like that of Mrs. DJ where sanitary towel was left behind for 31 months. Sanitary towels are generally used by health workers to plug the postpartum cervical os, in order to reduce bleeding into the episiotomy field during repair. This is usually done in the face of haemorrhage to improve operation field visibility. Problematic haemorrhage and/or when instruments or materials are unavailable, malfunctional, and inadequate or procedure performed by inexperienced staff can increase chances of error. In Mrs. DJ case, there was post-partum haemorrhage and the episiotomy repair was difficult. The staff did not use stringed or tied gauze packs, which would have been difficult to forget. Healthcare personnel can forget to remove textile material or instruments during complicated, extended, or emergency surgery, and shift changes in the operating team can also influence occurrences of such errors[5]. The retained materials become a focus for infection (including toxic shock syndrome), and can lead to medico-legal cases as patients may sue for malpractice,[7] in addition to immediate and long term morbidities, out-of-pocket expenses for treatment for the patient and maternal mortality in some cases.

Many patients experience symptoms following forgotten surgical materials, as Mrs. DJ did, but some have been known to become asymptomatic until many years later. A case report of an abdominal pack left after a Caesarean section was retrieved nine years after the initial surgery was performed, when fever and abdominal pain reemerged.[10] Mrs. DJ had symptoms continually for 31 months, starting with sepsis, which progressed to chronicity and was associated with medical and social sequelae. Other surgical materials that can be forgotten include artery forceps, broken pieces of instruments, irrigation equipment, scissors, needles and rubber materials.[11] Kaiser found 55% retained sponges after abdominal surgery and 16% after vaginal delivery.[12]

Several studies have been conducted to identify reasons why surgical materials/tools are forgotten so they can be avoided in future, and they indicate that the occurrence of gossypiboma and retained swab materials are preventable. Prevention hinges majorly on ensuring correct sponge counts are made at the beginning and before the end of the procedure, and the count should be done by at least two people.[13] This means that only appropriate surgical materials should be used while repairing episiotomies.

Some studies disagree that amount of blood lost at surgery or nurses changing during surgery are possible causes of forgotten packs, but emphasize that human factors such as exhaustion, absence of critical equipment necessary for accurate count and a chaotic environment have been shown to increase the risk of forgetting a tool/material,[14] with proposals that these factors cannot be fully controlled and surgeons must learn to mitigate them, especially as cases are also seen in western environments that have stronger health systems. A case was reported, in the US, of a 23-year-old Para 1 who presented two weeks post-partum with malodorous vaginal discharge and "pressure in the vagina". Labour was uncomplicated and vaginal delivery spontaneous, but she sustained a second degree perineal laceration which was repaired by the attending physician in the usual manner with estimated blood loss of 500mls. She was afebrile and in no acute distress, but vaginal examination revealed a desiccated 4×4 gauze located in the posterior cervico-vaginal fornix, which was removed, and patient given 5 day antibiotics empirically.[4]

The case of Mrs. DJ also resonates with narratives suggesting that Nigeria's health systems have weak health infrastructure, mal-distribution of health work force and provide fragmented health service delivery,[15] since she consistently visited several facilities, but received non exhaustive evaluation and an unidentified problem. A case was also reported of an undiagnosed case of a retained vaginal gauze postpartum, which migrated to the bladder and presented as a bladder stone and multiple clinical evaluations for her chronic abdominal pain all failed to detect the retained gauze.[16] The workers propose, for prevention, that vagina gauze **p**acks introduced after transvaginal surgery or delivery should be cared for as in other parts of the body, and retained surgical gauze should be considered among differential diagnosis in postpartum patients with abdominal pain, bladder symptoms or pelvic abscess.[16]

However, in our setting where sanitary towels provided by patients are improvised as swabs in labour and during delivery, extra precautions need to be taken since the nurses do not keep record of these pads, unlike sterile gauze that are provided by the hospital and accounted for by the nurses. Prevention can be achieved by educating women during the Antenatal classes about this occurrence and the danger signs that may suggest retention of surgical material/instrument. Prevention will also depend on use of appropriate principles of perineal surgery using appropriate equipment and sterile hospital provided gauze packs, appropriate lighting, vigorous haemostasis, adequate analgesia and adequate exposure.[17] Well-trained and proficient health workers should repair episiotomies and younger doctors like house officers and others in training should be supervised by older colleagues and trainers, and repeat bimanual examinations should be performed after genital tract procedures. This way, foreign bodies and other anomalies can be picked early.

Mrs. DJ visited five different doctors on multiple

occasions, but she never had pelvic examination performed to evaluate the persistent genital symptoms, which would have helped earlier identification. Mrs DJ, at presentation, did not have features suggestive of toxic shock syndrome (TSS), a life threatening condition associated majorly with tampon use and toxin production majorly by three bacteria-staphylococcus aureus, clostridium sordelli and streptococcus pyogenes, whose toxins can cause failure of vital organs, such as the liver, lungs or heart.[18] There is a possibility Mrs. DJ had initially experienced an undiagnosed TSS but the multiple antibiotics prevented major sequelae.

The importance of the postnatal visits should be emphasized and health workers should be trained/ supervised to address puerperal symptoms comprehensively and provide detailed pelvic examinations, early diagnosis and treatment for secondary prevention. The WHO recommends first contact within 24 hours post-partum, second contact on day 3 (48-72 hours), third contact between day 7 and 14 post-partum, while final postnatal contact should be at 6 weeks after birth, and the aims include pelvic infection evaluation.[19] Mrs. DJ therefore did not benefit from postnatal clinic attendance, since she was seen repeatedly by health workers who failed to evaluate her comprehensively. Considering that primary and secondary prevention failed for Mrs. DJ, she requires tertiary prevention services to address the disabling chronic pelvic pain and secondary infertility resulting from these multiple levels of health systems error. This is complicated by her payment of bills as out-of-pocket expenses considering she had no health insurance scheme. This has medico-legal implications and could attract legal suits in other societies, but low levels of education, poverty, power issues and other barriers to accessing legal aid services prevent patients like Mrs. DJ from seeking legal redress/ compensation, a gap that further reinforces the occurrence of medical errors in our environment. Cases like this should also be reported to prevent reoccurrence and myths surrounding these incidences and alleging spiritual causes, which have been associated with under reporting,[20] should be debunked.

On the overall, postoperative checklist for removing vaginal pack before patients discharge and thorough vaginal examination during immediate follow-up may help in reducing the incidence of a forgotten gauze piece.[21] Medicolegal cases and litigation have also been documented in cases of forgotten swabs in Nigeria,[13] which is a call to more thorough patient evaluation and care.

Conclusion

More competent senior doctors and supervisors should supervise younger and less experienced colleagues to forestall the occurrences of such cases, which could terminate medical careers if prosecuted as a case of medical negligence, in addition to sequelae including maternal morbidity and possibly mortality. Repeat pelvic examinations should be performed after vaginal procedures to ensure no foreign material is left behind, and all women presenting with abdominal and genital symptoms should receive exhaustive evaluation including appropriate vaginal examinations and investigations.

References

1. Patil KK, Patil SK, Gorad KP, Pandial AH, Arora SS, Gautum RP. Intra-luminal migration of surgical sponge:gossypiboma. Saudi J Gastroenterol. 2010; 16(3):221–222.
2. Manzella A, Filho PB, Albuquerque E, Farcas F, Kaecher J. Imaging gossypiboma: pictorial review. AJR. 2009; 193:504–5101.
3. Wan W, Le T, Macario RL. Improving safety in the operating room: a systematic literature review of retained surgical sponges. Curr Opin Anaesthesiol. 2009;22:207–214.
4. Chapa H. An Unwanted Postpartum Gift: The Issue of Retained Vaginal Sponges and Gauzes after Vaginal Birth. Gynecol Obstet (Sunnyvale) 4: 252. doi:10.4172/2161-0932.1000252. Available at https://www.longdom.org/open-access/an-unwanted-postpartum-gift-the-issue-of-retained-vaginal-sponges-and-gauzes-after-vaginal-birth-2161-0932.1000252.pdf Accessed 29/04/2021
5. La Calle JP. Surgical gauze pseudotumor. Am. J. Surg. 1988;155:235–237.
6 Aghahowa ME, Achem FF, Umobong EO, Ojo BA. Gossypiboma or Textiloma: A Report of 2 Cases and Strategies for Prevention. American Journal of Medical Case Reports. 2014: 123-125.
7. Segen's Medical Dictionary. Gossypiboma (2011). Available at http://medical-dictionarythefree dictionary.com/Gossypiboma Accessed 05/04/2020
8. Federal Ministry of Health Nigeria. National Health Policy (2016).
9. Poggi SBH. Post-partum Haemorrhage and the abnormal puerperium. In DeCherney AH, Nathan LN, Goodwin MT, Laufer N (Editors). Current Diagnosis and Treatment in Obstetrics and Gynaecology. Tenth Edition. McGraw-Hill Medical Publishing Division. 2007:477- 497.
10. Susmallian S, Raskin B, Bernea R. Surgical sponge forgotten for nine years in the abdomen: A case report. Int J Surg Case Rep. 2016; 28: 296–299. doi: 10.1016/j.ijscr.2016.10.026 PMCID: PMC5078 679.
11. Gibbs VC, Coakley FD, Relines HD. Preventable errors in the operating room: retained foreign body

in surgery. Current Prob Surg. 2011;44:261–337.
12. Kaiser CW, Friedman S, Spurling KP, Slowick T, Kaiser HA. The retained surgical sponge. Ann Surg. 1996;224:79–84.
13. Gümüş M, Gümüş H, Kapan M, et al. A serious medicolegal problem after surgery: gossypiboma. Am J Forensic Med Pathol. 2012;33(1):54-7.
14. Alemu BN, Tiruneh AG. Gossypiboma: A Case Series and Literature Review. Ethiop J Health Sci. 2020 ; 30(1):147-149. doi: 10.4314/ejhs.v30i1.19.
15. Federal Ministry of Health. The National Strategic Health Development Plan framework (2009-2015).
16. Wu CC, Hsieh ML, Wang TM. Retained vaginal gauze with unusual complication: a case report. Changgeng Yi XueZaZhi. 1997 ; 20(1):62-5.
17. Royal College of Obstetricians and Gynaecologists. Greentop Guideline No 29. The management of third and fourth degree perineal tears. Available at https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg29/ Accessed 9th June, 2020
18. Cleveland Clinic. Toxic Shock Syndrome. Available at https://my.clevelandclinic.org/health/diseases/15437-toxic-shock-syndrome Accessed 9th June, 2020
19. World Health Organization. Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice – Third Edition, 2015.ISBN 978 92 4 154935 6 (NLM classification: WQ 176). Available at https://apps.who.int/iris/bitstream/handle/10665/249580/9789241549356-eng.pdf Assessed 09/06/2020
20. Irabor D. Under-reporting of gossypiboma in a third-world country. A sociocultural view. *Health*. 2012;4, 56-59.
21. Rajaian S, Pragatheeswarane M, Krishnamurthy L. Forgotten gauze piece will not be forgiven always. J Postgrad Med [Serial online] 2019;65:186-7. Available from https://www.jpgmonline.com/text.asp?2019/65/3/186/262994