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Retained surgical needle post myomectomy, an uncommon mishap

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Abstract
Background: Retained foreign bodies are relatively uncommon and probably underreported in the tropics. Largely preventable errors, they cause harm to both the patient and the medical practitioner.
Case presentation and management: A 32 year old primigravida with recurrent lower abdominal pain in pregnancy. She had myomectomy a year earlier at a private hospital in which the endometrium was inadvertently breached. She subsequently had an elective caesarean section at 38weeks and 2days gestational age. Intra-operative findings were adhesive bands between the uterus and loops of bowel and a round bodied surgical needle attached by adhesions anteriorly to the lower segment. Her post operative care was uneventful and she was discharged home on the 3rd day post operation.
Conclusion: Retained surgical foreign body (RSFB) could pose a diagnostic dilemma as in the case of this patient with recurrent lower abdominal pain in pregnancy. Meticulous instrument count should include sutures and needles.

Keywords: - *Myomectomy, retained surgical needle, Mishap.*

Résumé
Contexte: Les corps étrangers retenu sont relativement rares et probablement sous-estimé dans les régions tropicales. Erreurs largement évitables, ils causent un préjudice à la fois au patient et au médecin.
Présentation de cas et de gestion: Une femme primo-gravide de 32 ans avec douleurs sous-abdominales récurrentes pendant la grossesse. Elle avait la myomectomie un an plus tôt dans un hôpital privé dans laquelle l'endomètre a été violé par inadvertance. Elle a par la suite eu une césarienne à 38 semaines et 2 jours d'âge gestationnel. Constatations intra-opérative étaient bandes adhésives entre l'utérus et anses intestinales et une aiguille chirurgicale a corps rond fixé par des adhésions antérieurement au segment inférieur. Ses soins post-opératives ont été simples et elle a été déchargée à la maison le 3ème jour après l'opération.
Conclusion: Corps étranger chirurgicale retenu (RSFB) pourrait poser un dilemme diagnostic comme dans le cas de cette patiente avec récurrentes douleurs sous-abdominales pendant la grossesse. Le compte d'instrument de méticuleux devrait inclure les sutures et les aiguilles.

Mots-clés: - *La myomectomie, aiguille chirurgicale retenue, malheur*

Introduction

Retained surgical foreign body (RSFB) is a major cause of concern for surgeons worldwide. Early identification and removal are mandatory to prevent morbidity as well as mortality. The major diagnostic dilemma still remains in the vagueness of presentation of this callous entity [1].

Retained surgical needle post myomectomy is relatively uncommon.The single most common item left behind is a sponge often referred to as gossypiboma. Incorrect instrument count, a major contributor to its incidence may result from other interrelated risk factors and an audit of these risk factors may provide the key strategies for prevention. We report a case of recurrent lower abdominal pain in pregnancy in a woman who had myomectomy. At elective caesarean section at term, we found a retained surgical needle within the lower segment.

Case

Mrs. H.S. a 32year old primary school teacher and primigravida was admitted for elective caesarean delivery at 38weeks and 2days gestational age.She had myomectomy for symptomatic uterine fibroids one year prior to presentation at a private hospital.

She started antenatal care at 6weeks gestational age in good health. Ultrasound scan done at 12weeks confirmed a viable pregnancy co-existing with multiple uterine fibroids. She had recurrent lower abdominal pains in the course of her antenatal care and was managed with analgesics due to possible degeneration of the fibroids in pregnancy. However, she had minimal symptomatic relief.

She had an elective caesarean section at term and intra-operative findings were hypertrophic

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midline infra-umbilical scar, round-bodied surgical needle attached to the anterior surface of the uterus at the lower segment by adhesive bands [fig1and 2] and adhesions between the uterus and the loops of bowel. A live male foetus was delivered cephalad.

She was discharged on the 3rd day post operation with mother and child in good condition.

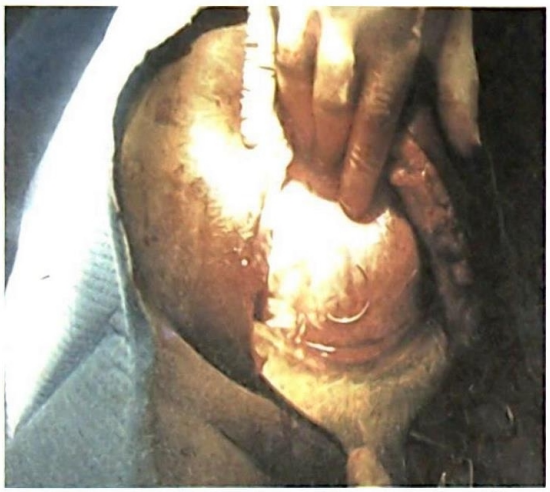

Fig.1: Showing the location of the surgical needle along the anterior wall of the uterus.

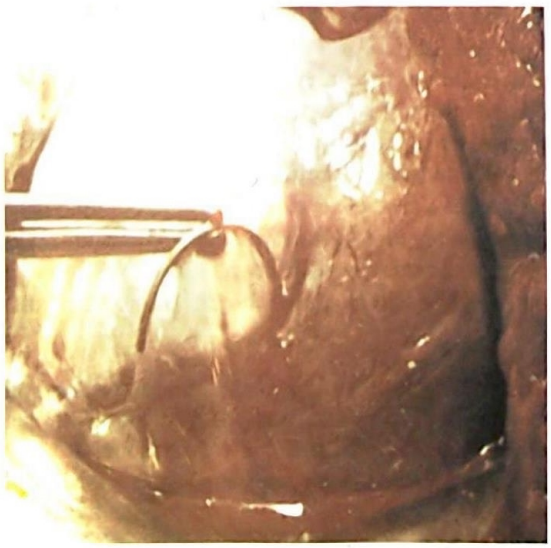

Fig 2: Showing adhesions attaching the needle to the anterior wall of the uterus.

Discussion

A retained surgical instrument is any item inadvertently left behind in a patient's body in the course of surgery. Retention of surgical objects in the abdomen or pelvis occurs with a frequency of 1 in 100 to 5,000 operations and accounts for 50% of malpractice claims for retained foreign bodies [2,3]. Retained surgical foreign bodies continues to be approximately 0.3–1.0 per 1,000 abdominal operations [4]. An estimated 1,500 operations result in retained surgical items each year in the United States and a review of miscount incidents using a nested case control analysis asserted that both the case duration and the number of providers present were independently associated with a more than doubling of the odds of a miscount incident [5]. Under reporting of cases in developing countries have been viewed from a socio cultural perspective rather than fear of litigation as would have been expected [6].

Retained surgical foreign bodies belong to some of the most puzzling examples of preventable surgical errors that both cause harm to the patient and carry serious professional and medico-legal consequences to the practitioner and the involved health facility [7-9]. The consequences of retained surgical tools include injury, repeat surgery, excess monetary cost, loss of hospital credibility and in some cases death of the patient [8,9]. Mrs. HS was quite fortunate as the surgical needle was entrapped by adhesions to the lower segment thus preventing migration and possible visceral perforation.

There are many different types of tools that have been left behind during surgery. Common instruments are needles, knife blades, safety pins, scalpels, clamps, scissors, sponges, towels, and electrosurgical adapters. Also retained are tweezers, forceps, suction tips and tubes, scopes, ultrasound tissue disruptors, asepto bulbs [10], cryotomes and cutting laser guides, and measuring devices. The single most common object left behind is a sponge [11]. Gossypiboma is the official name for a retained sponge/towel after surgery.

Human factors such as exhaustion, lack of tools necessary to aid in producing an accurate count, and a chaotic environment have all increased the risk of forgetting a tool [12]. These factors cannot be controlled and surgeons must learn to mitigate them. Some aspects of surgery that can add to chaos are performing unforeseen changes in the procedure and undergoing emergency surgery [12]. Consequently, the emergency room theatre is the place most likely to make mistakes [13]

Recurrent lower abdominal pain was the major complaints of Mrs. HS in pregnancy. Obstetric scans done were suggestive of uterine fibroids; hence she was managed for red degeneration in pregnancy with minimal symptomatic relief. A retained foreign body was never considered, underscoring the diagnostic dilemma experienced during the antenatal period. Being a metal, the needle would have been seen at

abdominal x-ray, but this is hardly indicated in pregnancy due to availability of ultrasound scan and potential hazards of irradiation [14]. The choice of an elective caesarean section was anchored on the history of a breached endometrium at previous myomectomy.

Vague presentation of foreign bodies and their consequences contributes to clinical diagnostic dilemma and often delays management. Diagnosis usually may require some radiological investigations to be able to rule out possible differentials. Useful radiological screening tools in pregnancy will include single diagnostic x-ray and Magnetic Resonance Imaging. Multiple x-rays should be discouraged as they can result in fetal teratogenicity [14]. These procedures invariably increase the cost of health care delivery in low resource areas. It may however suffice to develop a high index of suspicion in patients with a history of previous abdominal surgery with vague clinical presentation in pregnancy.

Currently, there are no known methods of entirely eliminating the occurrence of RSFB.The use of a hand held scanning device to scan the surgical wound site after surgery, before wound closure in patients in whom radio-frequency tagged sponges were used seems very promising [15]. This strategy however may not be cost effective in low resource settings as routine implementation would add approximately $144 dollars to the operation fee[15]. Modern technological advances designed to decrease the incidence of RSFB and improved perioperative patient processing (multiple 'checks and balances'and better provider -to-provider communication) [16] are imperative, especially in low resource settings. However, human and system factors need to be extensively addressed as it is very unlikely that technology alone would solve the challenges of retained surgical foreign body.

Conclusion

Retained surgical foreign body(RSFB) could pose a diagnostic dilemma as in the case of this patient. She had recurrent lower abdominal pains which may have been due to the retained surgical needle but however was managed for degenerating fibroid in pregnancy. This patient was opportuned to have the surgical foreign body removed at another surgery as an incidental finding otherwise she would have lived a longer period of her life with recurrent pain.

Though an uncommon mishap, the possibility of retained surgical foreign body should be considered in patients with a history of previous abdominal surgery presenting with vague clinical signs and symptoms.

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