

A central theme running through this edition of Feedback is that of wrong site surgery resulting as a consequence of disorientation. In some of these cases, specific pre or intra-operative checks might have helped to prevent mistakes. Case 78 emphasises the importance of reviewing results of relevant pre-operative investigations prior to undertaking surgery.

As ever, we are grateful to the clinicians who have provided the material for these reports. The on-line reporting form is on our website www.coress.org.uk which also includes all previous Feedback Reports. Published contributions will be acknowledged by a "Certificate of Contribution" which may be included in the contributor's record of continuing professional development.

DIGITAL DEBACLE

(Ref: 76)

The patient was a lady who sustained an injury to her right hand as a child, in which flexor tendons were cut and repaired. She was left with flexion deformities of metacarpo-phalangeal joints (MCPJ) of middle and ring fingers and of the proximal interphalangeal joints (PIPJs) with progressive deformities of both distal interphalangeal joints (DIPJs).

She was listed for DIPJ fusion of right ring finger and an extensor tendon reefing operation to right middle finger. Both fingers were marked preoperatively on both palmar and volar aspects. An arrow on the back of her hand pointed to the ring finger, indicating planned site of fusion of the PIPJ. Another arrow pointed to the middle finger denoting proposed extensor tendon reefing. She underwent surgery under general anaesthesia using tourniquet.

Unfortunately, I operated on the middle finger first and fused the DIPJ of her middle finger. This was the wrong finger to fuse. After undertaking the procedure I realised I had done this operation on the wrong finger. I have always been careful to mark patients so this could not happen. However it did happen. I then fused the ring finger DIPJ, which is the one I was supposed to fuse and also undertook the intended extensor tendon reefing procedure on the middle finger.

Immediately after the operation I told the patient what had happened and explained that I had made an error. To compound the situation, the patient subsequently suffered from ischaemic necrosis of the tip of the ring finger which necessitated amputation at DIPJ level.

Reporter's Comments:

This is a complication that should never happen. One should never operate on the wrong site. However,

unfortunately, it does happen. This was human error. It was my fault. I operated on the wrong finger on the spur of the moment, without heeding my preoperative markings, as the two fingers looked exactly the same (both had similar flexion deformities at the DIPJ).

CORESS Comments:

This is a frank account of a "wrong site procedure". Hand surgeons may be at particular risk of this eventuality because of potential confusion between digits as well as between left and right limbs. Adequate preoperative marking is crucial, but, despite comprehensive marking in this case, this did not prevent the wrong operation taking place. An Advisory Board member commented that, when operating on separate digits on one hand, he writes the name of the procedure on the digits with a fine indelible pen.

The Board felt that use of an adapted check list might have drawn attention to the potential problem. Where multiple procedures are contemplated, use of a check list should highlight risk of confusion between proposed sites of surgery. Other general comments made by the Board emphasise the need for surgical team members to be empowered to "speak up" if they recognise such a problem developing. Use of the surgical "time-out" enhances team communication. If a mistake is made and recognised, the question of whether to undertake further surgical procedures is raised. This might be the appropriate course of action, but the operating surgeon may benefit from asking for, and recording, the advice of a colleague. CORESS would welcome any comments suggesting effective ways of avoiding wrong digit surgery.

PATHOLOGICAL CONFUSION OVER RESPIRATORY OBSTRUCTION

(Ref: 77)

A man in his 50's was referred to the ENT Department of a major teaching hospital in another country, with an apparent extensive transglottic laryngeal carcinoma causing moderate respiratory obstruction. A biopsy had been taken by an experienced ENT colleague in another hospital, and the local pathologist had confirmed the diagnosis of carcinoma. Planned management was total laryngectomy, for which the patient had provisionally been listed.

Review of the pathology at a multi-disciplinary team meeting (MDT), which involved dual reporting of the slides, revealed that the correct histological diagnosis was, in fact, histoplasmosis of the larynx, easily treated with antibiotics. This was to the great relief of the patient who was a professional chorister!

Reporter's Comments:

The serious lessons to be learned from this case are the need to perform original biopsies or to obtain other appropriate confirmation of histology prior to surgery for malignancy.

CORESS Comments:

Despite modern practice methods including dual review of malignant pathology, accreditation of pathologists and development of MDTs, incorrect histological diagnosis still remains a potential cause of inappropriate surgery. When transfer of care occurs between different units or teams, the evidence for pre-existing pathological diagnoses should be reviewed scrupulously.

UNNECESSARY APPENDICECTOMY

(Ref: 78)

A 6 year old girl was admitted with right iliac fossa pain, fever and tachycardia. I reviewed her on my ward round on the following morning and requested a urine dipstick analysis, which had not been undertaken on her admission, and an ultrasound scan of the abdomen. After the ultrasound was reported as normal, she was seen by an ST3 trainee and booked for appendicectomy. I went to theatre to supervise the procedure and reviewed the medical records whilst the patient was being anaesthetised. I could find no record of results of the urine dipstick analysis. I called the ward, where the nurse in charge found a result in the nursing notes indicating dipstick testing positive for leucocyte esterase and nitrites, confirming urinary tract infection. By this time the patient had been anaesthetised and the operation was underway. At open surgery, a normal appendix was excised. Postoperatively, the patient was treated with antibiotics appropriate for her urinary tract infection and made a rapid recovery.

Reporter's Comments:

Inadequate assessment of the patient was made on her initial admission. Poor communication between medical and nursing staff led to an important investigation result being overlooked and an unnecessary operation being undertaken. Urine analysis should be undertaken (and checked!) prior to undertaking appendicectomy.

CORESS Comments:

The reporter has highlighted the problems here. The major failing was ordering a potentially diagnostic test [1], which may have averted the need for surgery and then failing to take heed of, or indeed, check the results. A pre-operative check list which required confirmation that investigation results had been reviewed and were available might have helped to avoid this circumstance.

- [1] Woodward M N and Griffiths D M.
Use of dipsticks for routine analysis of urine from children with acute abdominal pain. BMJ 1993;306: 1512

EPIDIDYMAL CONFUSION

(Ref: 81)

A 52 year old male presented with painful right sided chronic epididymitis following vasectomy. After failure of conservative measures, he agreed to right epididymectomy. He was seen on the day ward pre-operatively and the correct side was indicated with an arrow marked on the thigh. The WHO Surgical Safety Checklist was performed in theatre. After draping all but the scrotum, the surgical trainee made a midline scrotal incision and delivered a testis. I performed the epididymectomy myself. On replacing the testis within the scrotum, however, it became apparent that a left-sided procedure had been performed. A right epididymectomy was then performed immediately. The patient was informed of events when he had recovered from anaesthesia.

Reporter's Comments:

Mobile structures: When one testis is delivered from the scrotum via a midline incision, the two testes may lie in an antero-posterior axis, so that the side of the testis in

question may not be readily apparent. Particularly where there is no size discrepancy, palpation of the path of the spermatic cord is required to confirm the correct side on which the procedure is to be undertaken.

Multiple surgeons: Extra diligence is required when different surgeons perform sequential steps of a procedure. The surgeon taking over should be convinced that previous steps have been completed correctly.

Marking and draping: It is difficult to mark the scrotum and most surgeons will mark the groin or thigh. Drapes should be placed such that the mark remains visible throughout the procedure as an "aide memoire". This did not take place in this case.

CORESS Comments:

In this frank account, the reporter makes a number of valid and useful comments. It is also evident that use of the WHO Check list will not prevent this type of incident unless the checks are actually employed.

BARIATRIC BLIND LOOP

(Ref: 82)

I was undertaking a laparoscopic Roux en-Y gastric bypass, as a bariatric procedure, in a 35 year old diabetic lady with a BMI of 55. Part of this procedure involves bringing up an "omega" shaped loop of bowel in which the middle of the loop is stapled to the gastric pouch. At the critical part of the procedure, my attention was distracted by an SHO who burst through the theatre doors, which were in my line of vision, behind the laparoscopic stack. The SHO was looking for the on-call registrar who was required urgently in the Emergency Department. I looked up and informed the SHO that the registrar was elsewhere. I then transferred my attention back to the laparoscopic picture and undertook the anastomosis using a linear stapler. The procedure was completed and the patient returned to the ward.

Twenty four hours later, when the patient was vomiting bile and had developed a tachycardia, I realised that I had, in fact, performed a "Roux en-O" anastomosis, creating a blind-ended loop. After the distraction in theatre, I had lost laparoscopic orientation and anastomosed the wrong end of bowel to the gastric pouch. The patient was returned to theatre where the gastric bypass was revised and re-fashioned correctly. The patient made an otherwise

untoward recovery and at six months has lost 70% of her original weight.

Reporter's Comments:

Maintenance of orientation and intra-operative concentration is crucial in laparoscopic surgery. I allowed myself to become distracted by an external disturbance, losing orientation at a critical moment, which resulted in performance of an incorrect surgical manoeuvre. I have since re-orientated my theatre table for laparoscopic procedures so that the theatre doors are at 90° to the operating table, and now routinely perform a specific check with my team, prior to undertaking any laparoscopic anastomosis.

CORESS Comments:

Orientation and situational awareness are key components of laparoscopic surgery. External distractions should be kept to a minimum. Checking, to determine which end of a piece of bowel one is about to anastomose to another piece, is more difficult in laparoscopic than open surgery, but some check should be undertaken, as described by the reporter. Some surgeons may choose to mark a specific end of bowel by placement of a visible external suture.

FINALLY... MHRA have updated their popular publication *Devices in Practice*. This covers, in a series of checklists, a wide range of issues that need to be considered in the purchase, use and maintenance of medical devices, together with advice on training issues. Copies are available from the MHRA website:

<http://www.mhra.gov.uk/Publications/Safetyguidance/Otherdevicesafetyguidance/CON007423>

CORESS would like to thank the following members of the Advisory Board who have contributed to published Feedback reports in 2009:

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