

This issue of Feedback highlights, yet again, the importance of checking medications before administration and of adequate handover. Documentation of important medical data including drug allergies, as failed to happen in the case described below, is vital.

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](http://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.

## MISSED ANEURYSM DIAGNOSIS

(Ref: 104)

A 72 year old man presented to accident and emergency with acute deterioration on a background of a three month history of lumbar back pain. Two days previously, he had undergone lumbar spine X-rays, requested by the GP, in the same hospital. On arrival, he walked into the department but no observations were recorded nor any documentation of abdominal examination. The recent X-rays were not reviewed. He was sent home by an A&E SHO with a recommendation for GP follow-up and physiotherapy. He was re-admitted 24 hours later as an emergency with circulatory collapse and hypotension. On abdominal examination, an aortic aneurysm was palpable and the aneurysm was clearly visible on the previously undertaken lumbar spine X-ray. The on-call registrar requested an urgent CT angiogram which confirmed a ruptured 8cm abdominal aortic aneurysm with retroperitoneal haematoma, which was successfully repaired. The lumbar spinal X-ray

was subsequently reported on by the radiology department 8 days postoperatively.

### Reporter's Comments:

It cannot be assumed that acute pain is necessarily related to a history of chronic pain. Existing imaging should be reviewed in determining a diagnosis. In a hypotensive patient with a palpable aneurysm, CT angiography is inappropriate and such patients should be transferred to theatre for urgent aneurysm repair.

### CORESS Comments:

An elderly person with new sudden onset back pain constitutes a clinical red flag and should be dealt with urgently. Abdominal aortic aneurysm forms part of the differential diagnosis for lumbar back pain and abdominal examination is mandatory. Use of the PACS system might have allowed the original x-rays to be reviewed in a timely manner.

## LOCAL ANAESTHETIC LINE FLUSH

(Ref: 110)

I undertook open insertion of a double lumen Hickman line in a paediatric patient undergoing chemotherapy for osteosarcoma. The case proceeded normally. The line was tunneled from chest wall to cervical region, using the blunt tunnelling device in the kit, and inserted into the internal jugular vein. Line tip position in the right atrium was confirmed by image intensifier. The venotomy was closed with 6.0 prolene and both lumens of the Hickman line, back-bleeding having been demonstrated satisfactorily, were flushed with heparinised saline.

Just prior to closing, I realised that I had inadvertently tunneled the line through the pectoralis major muscle, rather than superficial to it. Concerned that this might cause pain or early occlusion, I removed the line and re-sited it superficial to the muscle. The radiographer was called back to theatre to re-confirm line tip position. After checking luminal back-bleeds again, I asked the scrub nurse for the heparinised saline and flushed both Luer locks and line lumens. At this point the scrub nurse realised that she had given me a syringe containing Bupivacaine instead of hepsal flush. Both syringes had been contained in the same kidney dish, appropriately labelled with circumferential grey and white stickers around the syringes respectively.

The anaesthetist was immediately informed and both lines were back-bled again. Fortunately, the instillate was a small volume and no adverse sequelae or cardiac arrhythmias were noted. The patient made an uneventful recovery from the procedure.

### Reporter's Comments:

I was distracted by the procedural revision and failed to check the flush prior to administration. In this case, both the heparinised saline flush and Bupivacaine were in similar syringes with pale-coloured labels. Syringes containing separate drugs should be clearly labelled and kept separate. After giving local anaesthetic, ensure that any surplus has been thrown away before flushing the lines. Always re-check a solution before re-administering it, even if it has already been checked before and has already been given.

### CORESS Comments:

This case illustrates a recurrent theme of inadvertent administration of the wrong drug due to procedural and systems failures, as outlined in the reporter's comments above. This has previously been highlighted in recent CORESS reports. When there are several solutions available, they must be clearly labelled. It is always the responsibility of the person giving the drug to check that it is the appropriate solution. This must be done even during a surgical procedure.

## SHOCKING SITUATION

(Ref: 106)

Whilst on-call as a surgical registrar, I was asked to review a 68 year old lady who presented with cellulitis of the right foot. There were no signs of systemic sepsis, but examination revealed cellulitis over the dorsum of the left foot. Her past medical history included type II diabetes mellitus, eczema and hyperimmunoglobulin E syndrome (HIES). She was allergic to penicillin and erythromycin. X-rays of the foot and inflammatory markers were normal. The patient was prescribed a course of oral Ciprofloxacin 500mg twice daily and discharged home. A follow-up appointment in the outpatient clinic was arranged. Within four hours of discharge, she was brought back to the emergency department with facial swelling. An allergic reaction to Ciprofloxacin was suspected and she was admitted under the medical team. However, on the ward, she was clerked by a second doctor, who, in error, re-prescribed Ciprofloxacin. Consequently, the patient received a further dose, precipitating anaphylactic shock. The patient required endotracheal intubation and was admitted to the intensive care unit (ICU) where she remained for two weeks.

### Reporter's Comments:

There was a lapse in safe and effective clinical handover. Fortunately, the majority of adverse drug reactions result in minor symptoms such as skin rashes. However, severe allergic reactions can be fatal. It is imperative to elicit and clearly document a detailed drug history for each patient, including severity of reactions. Extra caution should be taken in patients with a previous history of atopy or adverse drug reactions. This patient had a high risk of adverse drug reaction due to the history of eczema and HIES.

### CORESS Comments:

There was an obvious failure in communication amongst the nursing staff as well as doctors in this case. The incident also highlights the importance of an effective and comprehensive handover for continuity of care, which becomes even more important with an increase in numbers of shifts as a result of the implementation of the European Working Time Regulations. All drug charts should have a prominent box on the front listing allergies, and a patient with a known or suspected allergy should have a wrist band with the allergy written on it.

## A DRILLING EVENT

(Ref: 105)

A 65 year old previously fit man underwent a left total hip replacement in an independent treatment centre. Midway through the anaesthetic he developed a sudden tachycardia and narrowing of pulse pressure which concerned the anaesthetist. He was given boluses of vasopressors. In recovery his haemoglobin was measured at 8.7g/dL on blood gas analysis and his systolic blood pressure required on-going volume and inotropic support. He was, therefore, not extubated and the consultant orthopaedic surgeon contacted the vascular SpR at the nearby DGH, who arranged transfer. On arrival of the patient, the vascular surgical consultant was in attendance and the on-call interventional radiologist undertook a CT angiogram. This revealed active extravasation of contrast from the external iliac artery just above the inguinal ligament with a huge retroperitoneal haematoma. On further discussion with the operating orthopaedic surgeon, it became clear that, at one point in the procedure, the acetabular drill had slipped over the top of the acetabulum resulting in this injury. Operatively

an LSV interposition graft was required, but good recovery ensued.

### Reporter's Comments:

Vascular injury is a well-recognised complication of hip surgery, and drilling of the acetabulum can result in inadvertent injury to external and internal iliac vessels. Early recognition of bleeding and prompt communication with the nearby vascular surgical team resulted in a satisfactory outcome in this case.

### CORESS Comments:

Surgeons should be aware of the risk of injury to vessels lying in close proximity to skeletal structures when undertaking procedures on the latter. The physical signs of a concealed haemorrhage, sudden tachycardia and a sustained and unrelenting fall in blood pressure, despite volume replacement, will alert the operator to potential occult vascular injury. A high index of suspicion for this type of injury must be maintained so that it can be dealt with rapidly and appropriately if vascular damage occurs, as it inevitably will from time to time.

## FINALLY ...

From MHRA One Liners, Issue 85, April 2011:

### Attention a tension!

The MHRA has received a report where the vent tube/suction port of a chest drain unit was spigotted and taped when suction was discontinued and disconnected. This blocked the vent tube/suction port and prevented air escaping from the patient's chest, effectively clamping the drain. The patient developed a tension pneumothorax.

Users must not occlude the air vent tube/suction port of these units. After discontinuing suction, only use the vented cap

supplied with the device to cover the vent tube/suction port.

### Pump and circumstance!

MHRA also continues to receive reports of incidents of siphoning during use of syringe pumps. Unintended boluses can occur if the patient line is not isolated before the syringe is unclamped or removed. The risks are increased if high negative pressure medical devices, such as dialysis pumps and cardiopulmonary bypass pumps are also in use.

Consider using anti-siphon valves in the syringe set, but always clamp the patient line before removing the syringe or changing any accessories.