

# coress feedback

This issue of CORESS 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 online 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 (A&E) 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 eight 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 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.

## 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 there was a sudden tachycardia and a narrowing of the patient's pulse pressure, which concerned the anaesthetist; the patient required a bolus of vasopressors. In recovery his haemoglobin was measured at 8.7g/dL on a blood gas and his systolic blood pressure required ongoing volume and inotropic support. He was therefore not extubated and the consultant orthopaedic surgeon contacted the vascular Spr at the nearby district general hospital, who arranged transfer to accident and emergency.

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 long saphenous vein interposition graft was required but a 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 replacing volume, 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 damage occurs, as it inevitably will from time to time.

## Shocking situation

(Ref 106)

While on call as a surgical registrar, I was asked to review a 68-year-old woman who presented with cellulitis of the right foot. There were no signs of systemic sepsis and examination revealed cellulitis over the dorsum of the left foot. Her past medical history included type II diabetes mellitus, eczema and hyper-IgE syndrome. 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 in by another 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 where she remained for four weeks.

### Reporter's comments

There was a lapse in effective and safe 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 including the 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 hyper-IgE syndrome.

### CORESS comments

There was an obvious failure in communication among 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 increased number 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.

## 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 heparinised saline. 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 dysrhythmias were noted. The patient made an uneventful recovery from the procedure.

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### 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 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 CORESS reports.

When there are several solutions available, they should be clearly labelled. The colour of the label/syringe and position on the table should be varied to reduce the chance of misadministration. 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.

## Finally

### Attention: a tension

The MHRA has received a report where the vent tube/suction port of a chest drain unit was spigoted 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.

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