Background and Aims We present a case of a complication of bone cement implantation syndrome (BCIS) Grade 3. Its incidence has been suggested to be between 0.14%-0.68% for cemented total hip arthroplasty, with intraoperative mortality of 0.1%1. Clinical features of BCIS may include hypoxia, hypotension, arrhythmias, increased pulmonary vascular resistance and cardiac arrest. Dyspnoea and altered sensorium can be the first signs in the awake patient2. Common risk factors include old age, poor pre-existing physical reserve and impaired cardiopulmonary function2.

Methods A 86-year-old woman, severely frail, totally dependent3, with dementia, cardiac and renal impairment, underwent a total cemented left hip arthroplasty due to a femur fracture. A subarachnoid block was performed, and she maintained an hypotensive hemodynamic before and during the surgery. Suddenly the patient went into cardiac arrest as the cement was inserted with altered conscience and ventilation.

Results Immediate cardiopulmonary resuscitation (CPR) was performed, with intubation and mechanical ventilation. Intraoperative transthoracic echocardiograph detected acute pulmonary embolism with pulmonary hypertension. Heparin fibrinolysis was started but it was not possible to reestablish stable hemodynamics and after two CPR sequences the patient died in the operating room.

Conclusions Orthopaedic surgeons and anaesthesiologists should recognize the clinical presentation of BCIS and be prepared for its management4. Preoperative optimization by increasing oxygen inspiration concentration, communication in advance of the implantation of cement during operation, hemodynamics improved by usage of inotropes and vasopressors and avoiding of intravascular volume depletion5 are essential to reduce the incidence and consequences of this rare complication.

Background and Aims Sensory innervation of the breast is complex1, what makes general anaesthesia the most suitable anaesthetic technique. Nonetheless, patients with major cardiovascular diseases may be in high risk for complications2. The advance of ultrasound guided regional anaesthesia made possible general anaesthesia-free procedures, as Pava et al.3 demonstrated. This case report describes a successful case of breast surgery under sedation in a patient with major cardiovascular disease.

Methods A 31 years old female diagnosed with interatrial communication and severe pulmonary hypertension (PSAP 117 mmHg), treated with sildenafil 150 mg daily, presented on NYHA class II and proposed for right modified radical mastectomy. Paravertebral block was performed at 2 levels (T3/ T5, levobupivacaine 0,3% + epinephrine 1:200.000 10 cc/ level, T5 catheter insertion), plus PECS II (levobupivacaine 0,25% + epinephrine 1:200.000 30 cc) and superficial cervical plexus (levobupivacaine 0,25% + epinephrine 1:200.000 7 cc). Sedation provided with dexmedetomidine and propofol TCI (bispectral index monitoring, target > 60). ASA standard monitoring plus invasive arterial and central venous blood pressure. Emergency drugs were prompt available. Supplementary oxygen through non-rebreather face mask.

Results Surgery lasted 90 minutes and was successfully performed under light sedation. Spontaneous ventilation and hemodynamic stability preserved. Analgesia provided through paravertebral catheter during 36 hours (ropivacaine 0,2%/5 cc/h) with insignificant pain. Hospital discharge on postoperative day 2.
Conclusions Ultrasound guided regional anaesthesia is a game changer technique for breast surgery cases where general anaesthesia effects are undesirable, potentially mitigating risks in patients with major cardiovascular disease.

Background and Aims Managing Fentanyl Induced Hyperalgesia (FIH) twice in the same patient.

Methods 43 years old ASA1 female, with unremarkable surgical history, underwent wide local excision of the left breast following the diagnosis of intraductal carcinoma. Intraoperatively she received paracetamol 1g, diclofenac 75mg and fentanyl 200mcg. The surgery was uneventful. In PACU she reported “worst pain of my life”. Surgical complications were excluded. Her pain score remained 10/10 despite administering fentanyl 25mcg increments (Total 125mcg). Her pain decreased to only 7/10 after 25mg pethidine increments (Total 100mg). Finally, after administering ketamine 20mg and midazolam 2mg, the pain completely subsided. She was discharged home on oral paracetamol and diclofenac.

She presented 4 weeks later for a left mastectomy. Opioid-free anaesthesia was the chosen approach. IV induction was performed with midazolam 2mg and propofol 300mg then an LMA was inserted. Ultrasound-guided left pectoralis I+II blocks were performed using 0.5%L-bupivacaine 30 ml. Paracetamol 1g, diclofenac75 mg, and ketamine20mg were administered prior to skin incision. Dexmedetomidine infusion was administered throughout the surgery (1.5mcg/kg/h). Anaesthesia was maintained with sevoflurane whilst breathing spontaneously. In PACU patient reported postoperative pain 2/10 then discharged to ward after 30 minutes. Regular oral paracetamol, diclofenac and breakthrough tramadol 100mg orally were prescribed. The following day she reported being more comfortable compared to her previous surgery.

Results

Conclusions
- After excluding surgical reasons, FIH should be considered in all patients with refractory pain despite escalating doses of fentanyl.
- Ketamine as a suitable rescue strategy, multimodal analgesia and opioid-free anaesthesia should all be considered on suspicion of FIH.

Background and Aims The erector spinae plane (ESP) block is a regional technique associated with a multimodal approach that has shown a significant reduction in immediate postoperative pain and shorter hospital stay following lumbar spine surgery. Although it has been described as a technique of moderate or low complexity, several factors can make it difficult to use (lumbar approach, high body mass index, and anatomical abnormalities of the spine). This report describes the...