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### CARDIAC ARREST FOLLOWING BONE CEMENT IMPLANTATION IN TOTAL HIP ARTHROPLASTY – A RARE AND SUDDEN SYNDROME: A CASE REPORT

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**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%<sup>1</sup>. 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 patient<sup>2</sup>. Common risk factors include old age, poor pre-existing physical reserve and impaired cardiopulmonary function<sup>2</sup>.

**Methods** A 86-year-old woman, severely frail, totally dependent<sup>3</sup>, 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 management<sup>4</sup>. 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 depletion<sup>5</sup> are essential to reduce the incidence and consequences of this rare complication.

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### BREAST SURGERY UNDER REGIONAL ANAESTHESIA AND SEDATION IN A PATIENT WITH SEVERE PULMONARY HYPERTENSION: CASE REPORT

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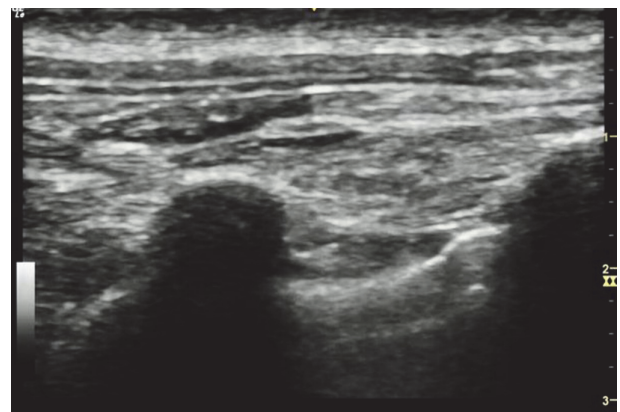
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**Background and Aims** Sensory innervation of the breast is complex<sup>1</sup>, what makes general anaesthesia the most suitable anaesthetic technique. Nonetheless, patients with major cardiovascular diseases may be in high risk for complications<sup>2</sup>. The advance of ultrasound guided regional anaesthesia made possible general anaesthesia-free procedures, as *Pawa et al.*<sup>3</sup> 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.



Abstract B207 Figure 1 Transthoracic echocardiogram, apical view.



Abstract B207 Figure 2 T5 paravertebral block

**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.