Theatre team contracts multiple syndromes as a result of bone cement

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Editor—We read with interest the recent editorial by Griffiths and Parker1 published in the January 2015 issue of the BJA, which deals with bone cement implantation syndrome during surgery for proximal femur neck fractures. Their editorial concerns an article written by Olsen and colleagues2 entitled, ‘Bone cement implantation syndrome in cemented hemiarthroplasty for femoral neck fracture: incidence, risk factors, and effect on outcome’.

The editorial1 mostly states the rate of the syndrome in Europe and to what extent patients respond to the cement during surgery and postoperatively depending on their physical status (ASA class). They correctly state that not only surgeons should be aware of bone cement adverse events, but also, anaesthetists and the theatre team (i.e. nurses, technicians). If the syndrome is prevalent in Europe (Northern countries), are the same occurrences happening in other parts of Southern Europe and the world?

Does the syndrome affect more males than females? Does ethnicity have a major implication for patients to develop the syndrome? Although the patient’s physical ASA status has major implications for its development, patients from other countries may not manifest adverse effects as the people from Northern Europe and the UK.

We would like to suggest to the editorial1 authors the following aspects of the implantation syndrome that can also affect the operating and theatre teams in ‘Multiple syndromes’ (http://www.cdph.ca.gov/programs/hesive/Documents/mma.pdf) such as:

- Eyes, Nose, and Throat: Vapour in the air at a level of 125 ppm may cause teary eyes, sore throat, coughing, and irritation of your nose.
- Skin direct contact with liquid can cause itching, burning, redness, swelling, and cracking of the skin. Repeated skin contact can cause dermatitis (skin rash). Allergic reaction can occur. Prolonged skin contact may cause tingling, numbness, and whitening of the fingers. Methyl methacrylate (MMA) easily penetrates most ordinary clothing and can also penetrate surgical gloves.
- Nervous system overexposure affects the brain the way drinking alcohol does. Symptoms may include headache, drowsiness, nausea, weakness, fatigue, irritability, dizziness, and loss of appetite and may also cause sleeplessness.
- Reproductive system- some studies have suggested that MMA can cause birth defects when pregnant animals are exposed to extremely high levels. It is not known whether MMA can affect pregnancy in humans. MMA inhaled by a pregnant woman can reach a developing foetus. Women who may be pregnant should avoid overexposure.

Declaration of interest

None declared

References


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Bone cement implantation syndrome and the surgeon

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Editor—The editorial on Bone Cement Implantation Syndrome1 heightens one’s awareness of a condition that most trauma anaesthetists know of, but tend not to look for. The authors are well known to the hip fracture anaesthesia community and have to be commended on a fantastic job in raising the profile of this large group of patients that require careful perioperative management.

I often find that the decision on whether to cement or not depends on the surgeon. I am becoming aware that younger orthopaedic surgeons seem unwilling to use uncemented prostheses and the default position is to proceed with cementing with an acceptance of the risks. Older surgeons, on the other hand, appear to be quite amenable to the suggestion to avoid cement.