Wire localised, wide local excision of breast tumour under local anaesthesia: a case report

JENNIFER POLLARD, ANU SHROTRI & BILL HORTON

Keywords: breast cancer, local anaesthesia, co-morbidities, wide local excision.

Abstract

For patients afflicted with breast cancer and other significant co-morbidities, the authors would like to promote an alternative lower risk strategy to general anaesthesia for wide local excision of breast tumours.

A similar approach could also benefit those patients with a morbid fear of general anaesthesia.

Introduction

Wide local excision is a breast conserving procedure offered to women with suspected or confirmed breast carcinoma: this enables removal of the lesion without resorting to mastectomy. In non-palpable breast carcinomas, wire localisation is used to pinpoint the lesion. This aids the surgeon to successful remove the carcinoma. A wire is inserted into the area of suspicion under x-ray guidance to ensure the correct area is eradicated. The breast surgeon will then excise the tissue with the wire, and a margin of healthy tissue to ensure complete elimination of the lesion. In the United Kingdom, this is a procedure that is routinely performed under general anaesthesia. It requires tunnelling through the breast tissue to perform extensive dissection, and therefore has the potential to be a very painful procedure. In patients with significant medical co-morbidities, a general anaesthetic can prove highly problematic and a life-threatening risk in its own right. Operative treatment might be avoided on balancing the relative risks and benefits. An alternative is treatment with primary endocrine therapy, which is proven to be effective but is not the therapeutic pathway of choice. Although primary endocrine therapy is largely successful, there is a significant possibility that it might fail at some point in the future. In our organisation, breast cancer surgery is not routinely performed under local anaesthesia. However, in patients whose co-morbidities place them at high risk of morbidity or perhaps mortality consequent to general anaesthesia, could this be an alternative to enable curative surgery for their cancer? We present a case summary of a wire localised, wide local excision of breast tumour performed under local anaesthesia facilitated by conscious sedation.

Case report

MB was a 54-year-old lady

Her past medical history included bronchial asthma complicated by smoking induced severe COPD.

She continues to smoke despite her stated endeavour to stop.

She has been intermittently under the care of the chest physicians for over a decade.

A bronchoscopy, performed in 2000, proved unremarkable. At best, her exercise tolerance was 20 yards; she was rendered exquisitely short of breath by a flight of stairs and needed 3 pillows to sleep at night.

Occasionally she could barely manage to walk around the house to perform basic activities of daily life without getting very breathless.

She suffered from repeated chest infections.

Her initial presentation to the breast clinic was in 2003 with a family history of breast carcinoma - 2 sisters developed breast cancer aged 41 & 61. She was assessed as medium risk for developing breast cancer in the future. In 2007 a third sister developed breast cancer at the age of 56.

Surveillance mammography in March 2010 detected new microcalcification in her right breast. She was seen in the Joint Care Clinic where she underwent physical examination and subsequent radiological and cytological

Authors’ Address

DR. JENNIFER POLLARD* CST1 Breast Surgery
MRS. ANU SHROTRI Associate Specialist in Breast Surgery
DR. BILL HORTON Consultant Anaesthetist
Aintree University Hospital NHS Foundation Trust, Longmoor Lane, Liverpool L9 7AL
assessment. A stereotactic core biopsy was also performed and histology results showed Ductal Carcinoma In-Situ (DCIS). Supplementary oxygen was delivered by nasal speculae.

The results were explained to the patient and her family, and her treatment options were discussed.

Her treatment was fast tracked onto the earliest available operating list. Initially she was listed for a wire localised wide local excision under a general anaesthetic. However, this was reconsidered on the day of surgery. The patient herself was extremely fearful of undergoing general anaesthesia and was fully aware of the risks this would pose to her chest. After a full and frank discussion between the clinicians and the patient, it was decided to proceed with the operation under local anaesthesia facilitated by conscious sedation. The patient was counselled extensively regarding how the procedure would be performed, how she would receive the anaesthetic and the risks involved. After this comprehensive dialogue, the patient readily agreed to have the procedure performed under local anaesthesia. The operation was performed as a collaborative effort between the anaesthetist, the surgeon and the theatre staff in an isolated day surgery centre.

**The Operation:** wire localised, wide local excision of right breast tumour under local anaesthesia.

**Procedure**

The local anaesthesia technique employed was one of progressive tissue infiltration with 0.25% bupivacaine to a total dose of 40mls.

Skin incision and excision of the mass were performed without untoward event. Specimen x-ray showed the lesion was close to medial and inferior margins, so an inferior cavity shave was undertaken.

The defect was closed with 3-0 Vicryl to subcutaneous tissues and 3-0 Vicryl interrupted sutures to skin.

Pressure dressing was applied to area and left in situ for 24 hours.

**Conscious Sedation**

Breathlessness required that the patient be transferred by wheelchair the 20 or so yards from the day ward to the anaesthetic room.

Peripheral intravenous infusion and routine physiological surveillance were established.

The latter included pulse oximetry, three lead electrocardiography and intermittent non-invasive blood pressure readings.

Increments of fentanyl [total dose = 100 micrograms] and propofol [total dose = 60 milligrams] were used to assure anxiolysis and ameliorate pain during the injection of local anaesthetic agent.

Verbal contact was maintained with the patient throughout the operative journey.

The patient was entirely comfortable throughout the procedure and did not voice any dissatisfaction.

She had no complaints after the procedure was completed and stated that she was very pleased to have been offered the option of surgery under local anaesthesia.

She encouraged the authors to publish this case report that other patients might benefit from her very positive experience.

**Conclusions**

Given the success of this procedure, particularly the patient’s satisfaction, it raises the possibility of performing more wire localised wide local excisions under local anaesthetic in patients for whom general anaesthesia represents additional and avoidable risk.

MB is not alone in having a greater fear of the general anaesthesia than the surgery. It is believed that more than 30% of patients are of similar mind and there is a belief that failure to attend on the day of surgery is a significant consequence.

**References**