

Nurse-led Breast Tissue expansion

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History

Two stage breast reconstruction after mastectomy remains the most frequent surgical option for restoring a symmetrical breast mound compared to the normal breast. This technique comprises two separate surgical procedures, the first of which is insertion of a tissue expander which can be inflated with saline over numerous out-patient sessions. This will gradually expand the chest wall skin to achieve a breast shape comparable to the adjacent normal breast. After a period, usually about three months, the expander is replaced with a definitive anatomical shaped silicone implant of the same size.

Inflation is carried out using a magnetic locator overlying the metallic injector port which lies just under the skin surface of the chest wall. A volume of 100ml of saline is typically injected at any one session with up to four or five sessions needed to complete inflation. One of the problems identified was limited availability of consultants or experienced staff able to carry out the expansion on dressing clinic days, and the limited choice of days in the week which often did not suit the patient.

Training

Breast tissue expansion was historically always carried out by consultants and junior doctors in the plastic surgery dressing clinic at the University of North Durham (UHND). In 2006 as part of the appraisal system it was decided that two nurses currently employed in the dressing clinic should undertake the necessary training to carry out the breast tissue expansion themselves. The aim was to improve the overall service, continuity of care and to reduce patient waiting times.

The training consisted of time spent with

the breast care nurse at the RVI, sessions with the tissue expander representatives and direct supervision by the consultants until the staff nurses were deemed proficient in this procedure. The average duration of supervised training was three months. The consultants now only see the patients on completion of the expansion process to decide on a replacement implant of suitable volume, or if any problems arise.

In order to assess the quality of service provided by the staff nurses an audit was carried out, which was in the form of a questionnaire (see appendix). The short questionnaire was distributed to 20 patients who had completed their breast tissue expansion during the two year period the nurses had been performing tissue expansion. It consisted of 13 multiple choice questions and one open-ended question asking the patient if there was anything else she would like to say regarding her experience. Eleven (55%) were returned for analysis and reporting.

Results

All but one respondent had received an information leaflet regarding breast tissue expansion prior to their procedure; 60% found it 'very useful', 30% found it useful' and the remaining respondent found it 'of some use'. All respondents were introduced to or given the name of the nurse who would carry out the expansion when they attended their first appointment. Eighty two per cent of respondents stated that they were seen within 30 minutes of their clinic appointment 'at every appointment'; the remainder stated that this happened at 'some of the appointments'.

All but one respondent stated that they were advised to take pain killers before they went to clinic for their expansion appointments. Of the

respondents who were advised to take analgesia, 80% had taken some prior to attending. All but one of the respondents who had taken analgesia stated that they had worked. None of the respondents who did not take analgesia felt that they were needed. Thirty six per cent of respondents stated that their experience of breast tissue expansion was 'fully' what they expected; 46% that this was the case 'to some extent' and the remainder that it was not what they expected.

No respondent stated that they would have preferred their expansion to be carried out by a doctor although two stated that they would have liked to have seen the consultant more during the expansion process. Eighty two per cent of respondents stated that any queries or questions were 'fully' answered to their satisfaction and the remainder stated that this was the case 'to some extent'. All stated that they were given contact details if they had any problems or concerns.

Respondents were asked to rate their experience on a scale of 1-10, with 1 being dissatisfied and 10 being highly satisfied. All respondents rated their experience over 6. Only one respondent (9%) rated their experience at 6. Three (27.5%) respondents gave an 8. Four (36%) respondents gave a 9 and three (27.5%) gave a 10.

Discussion

Nurse involvement in breast reconstruction has traditionally been limited to providing information and education programmes or psychological support supporting these procedures^{1,2,3,4}. Increasingly the role of the nurse has expanded to providing invasive procedures such as cannulation and injection of joints and soft tissues^{5,6,7}. Our programme in the University Hospital of North Durham expands the role of the Nurse to that of injecting tissue expanders and the results to date have been very successful.

The following are some of the responses from the final question asking patients to tell us about their expansion experience.

'I was impressed by the professionalism of all the staff, the overall cleanliness of the department and the efficiency of the desk staff. I was always given an appointment suitable for me. At a time in my life when morale was low I always felt happy and positive after each visit. The girls are angels, all of them.'

'I found the nurses who dealt with me very helpful. Every question I had was answered and good advice given. I saw my consultant at most appointments as I had an infection plus other problems – all dealt with satisfactorily.'

'During my time on the ward during my surgery, the nurses were excellent. They made me relaxed and confident about the procedure and my stay was pleasant. At my follow-up appointments at the dressing clinic, I was made to feel at ease and had a full explanation of what would be happening at the next appointment. Thank you.'

'The nurses at this clinic are very helpful and made the whole process easy to get through, even the receptionist at the clinic was really lovely.'

'It would have been useful to have someone to explain the full process – expansion, the two month wait while over inflated and then the implant having the liquid taken out until the correct size is reached. I don't feel that I was prepared at all for this process.'

'Two or three times I arrived at the clinic at my appointed time only to find that neither of the breast expansion nurses were on duty. Once a doctor came and did the expansion. On the other occasions I had to go back home and come back another time. The appointments should be more carefully made by ensuring that one of the nurses will be available.'

Conclusion

It was found that on the whole the overall patient experience was positive during the expansion process, although there were some areas which could be improved. Certainly the need for consultant input has been reduced, leading to a more rapid and acceptable pathway for the patient. An action plan has been developed and implemented to resolve some of the negative issues which were raised by the respondents.

In case of absence of staff capable of performing tissue expansion an 'X' circled in red has been added next to patients' names in the appointment book. Therefore patients can be easily identified and contacted should no staff nurse be available to carry out tissue expansion, to prevent unnecessary inconvenience.

A new patient information leaflet has been developed emphasizing that tissue expansion is a lengthy process, it also includes updated information regarding expansion. The leaflet will be given out at the initial pre-operative assessment which allows time for the patient to ask any further questions prior to their operation.

The aim is that these changes to the breast tissue expansion service will improve patient care and quality, addressing in particular the areas for improvement highlighted by patients who completed the audit. A further audit is intended to be carried out in three years.

References

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