"Cancer" is described as their diagnosis by three times as many patients scheduled for mastectomy compared with those scheduled for breast conserving surgery

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Background

Psychological distress in breast cancer patients[1-4] who undergo a mastectomy or breast conserving surgery has hitherto been studied *after* they had their operation. The effects are presumed to be mostly cosmetic.

We wondered:

- **Does the psychological distress of a cancer operation commence even before the operation?**
- **Does a patient's perception of a diagnosis of cancer depend on the type of operation she is about to undergo?**

We assessed how patients, who were due to undergo an operation for breast cancer, expressed their own diagnosis.

Setting

In our specialist breast unit, the patient's journey is as follows:

Initial Consultation is at a one-stop clinic, or in the screening assessment service. This is where the diagnosis of cancer is first given

Second consultation is after discussion of the core biopsy at the multidisciplinary meeting. This is a longer consultation when the diagnosis of cancer is explicitly confirmed and a treatment plan including the type of operation- mastectomy or wide local excision is discussed.

Some patients have **a third consultation** with the oncologists to discuss about Targeted intra-operative radiotherapy[5].

The typical duration between the diagnosis and operation is 2 to 3 weeks. During this time the patients have the opportunity to discuss their cancer diagnosis with specialist breast care nurses.

Method

Student doctors normally take the history of breast cancer patients admitted in our wards for surgery.

In the course of this history-taking, they asked 52 patients, why they were having their operation: "Which operation will you be having, and why?"

This was a deliberately candid question asked by someone whom the patient had not met during their journey and not directly responsible for their medical care. We therefore expected that the answer to the question to closely reflect the patient's own perception of their disease.

After the surgery, we calculated the Nottingham prognostic index (NPI = size x 0.2 + nodal status + grade) for all patients except in 2 in the mastectomy group and 4 in the breast conserving surgery group as they did not have invasive component.

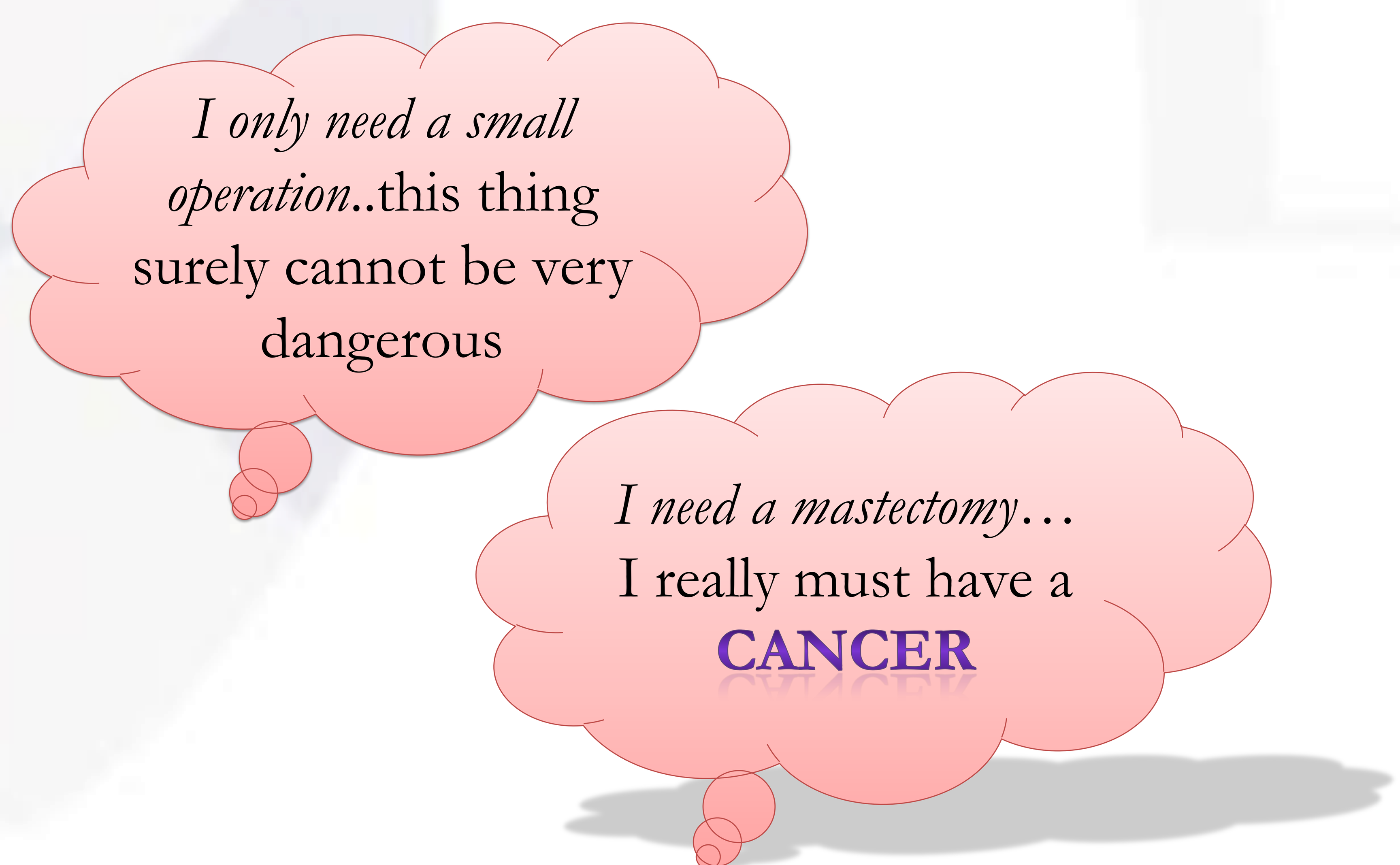
We used chi square test and Student's t test (Microsoft Excel 2007) for statistical analysis. The influence of the type of operation, age and final NPI on how the patients expressed their diagnosis was analysed using multiple regression.

Results

In answer to the question: "why are you having the operation?", the patients who were scheduled for a mastectomy used the term cancer three times more than those scheduled for breast conserving surgery (19/26 vs. 6/26, RR=3.17, 95%CI 1.51-6.63, p=0.00036).

These responses did not correlate with either their age or their final Nottingham prognostic index.

	"Why are you having the operation?"		
	"Cancer"	**A euphemistic term such as "breast lump"**	**Total**
Mastectomy	19	7	**26**
Breast conserving surgery	6	20	**26**



Discussion

The new finding: Despite being told the diagnosis of cancer several times through their journey, patients used the term cancer or tumour far more often when they were about to undergo a mastectomy (19/26) compared with breast conserving surgery (6/26).

Possible confounding factors: We do not generally use the term "lumpectomy". The terms "wide local excision of cancer" or "remove the cancer with some normal tissue around it" are used – so this would not have influenced the patients' perception. Although patients scheduled for a mastectomy in general had poorer prognosis, (mean NPI 4.93 vs. 3.63, p=0.00002), those who actually used the term cancer/tumour did not have a poorer prognosis (mean NPI 4.54 vs.4.03, p=0.12) – so they were not even guessing their prognosis correctly.

Unorthodox method: This study has elicited the candid responses from patients that may not have been uncovered with a more formal interview- which we perceive as a strength rather than a weakness of the study.

New perspective: This study for the first time addresses the effect of the prospect of a mastectomy on patient's expression of their diagnosis. This difference in patient's perspective appears to be distinct from the hitherto studied effects that are mainly cosmetic.

Possible explanations: The very prospect of a mastectomy appears to be associated with a need to internalise the diagnosis of cancer, while the prospect of breast conserving surgery spares them this trauma.

- Perhaps it is necessary for the patient to convince herself of a graver prognosis before she accepts a mastectomy, while it is easier for her to undergo a breast conserving surgery to use denial as a coping mechanism
- Similarly, the surgeon could be subliminally suggesting a poorer prognosis to allow better acceptance of a mastectomy.
- Conversely, patients who (albeit wrongly) perceive their diagnosis in a graver light may choose to have a mastectomy.

Is this disappointing? Should it prompt even "better" communication with those having lumpectomy? Many of these patients would be expected to have an excellent prognosis: should we force them to stop using self-denial as a coping mechanism? Especially when they subconsciously chose not to say "cancer" to the medical student / to themselves?

Implications: Rather than trying to better imprint the diagnosis of cancer on those undergoing breast conserving surgery, we should recognise that the psychological impact of a mastectomy is not only cosmetic, but its very prospect could imprint a worse-than-real prognosis on the patient's mind.

This is especially relevant today as many screen-detected cancers could have excellent prognosis, although they may need a mastectomy for reasons such as extensive ductal carcinoma in situ.

It is conceivable that similar perceptions exist in other cancer patients, (e.g., for example, addition of colostomy may worsen the perceived prognosis).

Conclusion

The patient's expression of a "cancer diagnosis" was associated with the very prospect of a mastectomy – a more disruptive operation- rather than their actual prognosis, or their age.

Insights from this study need to be confirmed in larger studies and these results could generate new hypothesis about patient perception, communication and psychological experience of cancer patients.

References:

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