BJD
British Journal of Dermatology

Patient satisfaction with post-operative telephone calls after Mohs micrographic surgery: a New Zealand and U.K. experience

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Accepted for publication
15 April 2012

Funding sources
Not applicable.

Conflicts of interest
None declared.

This work has been submitted for consideration at the British Society of Dermatological Surgery Symposium at the 92nd Annual Scientific Meeting of the British Association of Dermatologists, 3–5 July 2012, Birmingham, U.K.

DOI 10.1111/j.1365-2133.2012.11011.x

Summary

Background Mohs micrographic surgery (MMS) is regarded as the gold standard for treating nonmelanoma skin cancers of the head and neck. Surgical interventions can generate anxiety for patients and efforts to minimize this may enhance their experience.

Objectives To assess the perceived patient benefits of post-operative telephone follow-up (TFU) calls after MMS.

Methods A prospective, controlled, questionnaire-based assessment of patient satisfaction with TFU calls in patients undergoing MMS was conducted in two centres (New Zealand and U.K.) over a 4-month period from June to September 2011. All individuals in the study group were telephoned on the evening of their surgery by the operating surgeon. Questionnaires were completed by all patients at the time of suture removal.

Results The median Likert score on a 10-point scale relating to patients' perception of the TFU service was higher in the study group compared with the control group (10 vs. 9), with no correlation to closure type of the surgical defect. Overall patient satisfaction with the TFU service was high (94% New Zealand; 96% U.K.), and this was independent of the patient's place of residence. There was no age or sex difference in the minority who did not find the TFU call helpful. The majority of patients felt the best time to call was the night of the surgery (89% New Zealand; 94% U.K.). All patients who had undergone MMS previously found the TFU call just as useful as the first time. The majority of patients (94% New Zealand; 96% U.K.) did not need to call the doctor post-surgery, although 7% of patients in the control group rang the surgeon with issues that could have been readily dealt with by the TFU service. Comparatively, more patients from the U.K. felt their satisfaction would have been the same with a nurse-led TFU call service compared with New Zealand (94% vs. 66%). A significant proportion of those who preferred to be called by the doctor underwent cutaneous flap closures. Patients felt that other specialities that perform surgical procedures under local anaesthetic should adopt a TFU service post-surgery.

Conclusions TFU calls post-MMS are a cost-effective, time-efficient way of achieving high levels of patient satisfaction.

Surgical excision of skin cancer with histological control of margins – Mohs micrographic surgery (MMS) – is regarded as the gold standard for treating nonmelanoma skin cancer of the head and neck.[1] Surgical intervention of any sort may generate anxiety for patients,[2] and thus any effort to minimize this may enhance their perception of the experience.

Anxiety levels may be heightened in patients undergoing MMS due to the inherent uncertainties of tumour removal in between layers, coupled with the variable time period patients physically have to stay until wound closure. A variety of methods have been reported in minimizing patient anxiety during MMS including personalized music[3] and the use of oral midazolam perioperatively.[4]

Post-surgery telephone follow-up (TFU) calls in a nondermatology setting have been reported to improve overall patient satisfaction with care delivered.[5] Although it has been standard practice at the Skin Cancer Institute for the past 15 years for the operating surgeon to phone patients on the evening of their MMS, the actual patient-perceived benefits of such a practice have not previously been assessed within the dermatology literature. We therefore undertook a questionnaire-based assessment of patient satisfaction with a TFU service in patients undergoing MMS.

Methods

The study was performed at two regional Mohs centres: The Skin Cancer Institute, Tauranga, New Zealand, and the Department of Mohs Micrographic and Reconstructive Surgery, Leeds Centre for Dermatology, U.K. The former institution operates predominantly in the private sector and the latter organization within the National Health Service of the U.K. Patients who underwent MMS were recruited prospectively over a 4-month period from June to September 2011. Following subsequent recommendations from the peer review process, a control group was prospectively recruited over a 1-month period from both centres to ascertain whether any differences existed between the groups. Both the study and control groups were comparable in relation to age, sex, patients' place of residence (in terms of proximity to the hospital or clinic where they were treated) and complexity of surgical reconstruction. Postoperatively all patients received verbal and written aftercare instructions including a contact phone number for their surgeon should they have any concerns. All individuals in the study group were telephoned on the evening (after 7 pm) of their surgery by the operating surgeon (J.H., Consultant Dermatologist and Fellow in Mohs Micrographic and Reconstructive Surgery, Tauranga; W.H., Consultant Dermatologist, Mohs Micrographic and Reconstructive Surgeon, Leeds). The content of the TFU call was standardized between the two centres with each surgeon asking a general open question of how the patient was feeling followed by more specific questions relating to pain, bleeding and the tolerability of the pressure dressings used. All patients were given specific instructions of what to do in the event of bleeding and the patients were reminded to contact the surgeon should the need arise. Both patient and carer were given the opportunity to ask any questions relating to the treatment they had received. Patients attending for MMS for the first time were unaware of the TFU service and therefore did not expect a TFU call on the evening of their surgery. Although patients who had previously undergone MMS were aware of the TFU service, they were not specifically informed to expect a TFU call from their operating surgeon that evening. Telephone messages were left in instances where the patient and/or named relatives were not contactable. All patients undergoing MMS over a 1-month period from both centres were recruited prospectively as the control group, and these patients were not telephoned by the operating surgeon.

Questionnaires relating to the TFU were completed by patients at the time of suture removal, typically 5–7 days post-surgery. Statements assessing patients' perception of the usefulness of the TFU call were scored using a 10-point Likert scale (1, strongly disagree; 10, strongly agree). Details relating to the surgical procedure were completed by the attendant nurse. Patients not returning for suture removal at either centre were sent a questionnaire the day after their surgery and asked to return the questionnaire in a self-addressed stamped envelope.

Results

Table 1 summarizes the data gathered in each centre in relation to patient demographics, anatomical location of the surgery and closure methods adopted at each centre. Regarding geographical location, approximately half the participants lived locally with the remainder living in nearby towns and cities. The proportion of patients undergoing MMS for the first time and those with previous experience were equivalent. The majority of patients and relatives were spoken with directly by the surgeon (96% New Zealand; 96% U.K.) with call times ranging from 1 min to 5 min. The median Likert score on the 10-point scale relating to patients' perception of the TFU service was 10 in both centres, with no correlation to closure type of the surgical defect. Similar levels of patients in both countries (94% in New Zealand; 96% of patients in the U.K.) reported high levels of patient satisfaction with the TFU service and this was independent of the patient's place of residence. There was no age or sex difference in the minority who did not find the TFU call helpful.

Regarding the time to call, 89% of individuals in New Zealand and 94% in the U.K. felt the best time was the night of the surgery and 8% and 4% (New Zealand and U.K., respectively) preferred the day after surgery. All patients who had undergone MMS previously found the TFU call just as useful as the first time they had experienced it. The majority of patients (94% in New Zealand; 96% in the U.K.) did not need to call the doctor subsequently; the remainder who did, did so with relevant concerns relating to surgery, for example, drain falling out, haematoma formation or evolving infection. Interestingly, 94% of patients in the U.K. felt their satisfaction would have been the same had the nurse made the TFU call, whereas in New Zealand, only two-thirds of patients shared this view. A significant proportion of those who preferred to be called by the doctor underwent cutaneous flap closures. In addition, patients who experienced longer surgical procedures did not appear to respond differently to TFU calls and questionnaires nor did this group initiate calls at a different rate. In both centres, the majority of patients felt that other specialities that perform surgical procedures under local anaesthesia should adopt a TFU service post-surgery. Table 2 illustrates some of the comments received from patients regarding the TFU service, which were overwhelmingly positive.

Regarding the control group, 85% had MMS for the first time with the remainder having had prior experience of this type of

Table 1 Summarized data collected between the two centres in relation to patient demographics, surgical sites and closure methods adopted

	New Zealand	U.K	Control group
Number of participants	138	49	54
Mean age (range), years	64·5 (21–91)	64·8 (20–90)	64·5 (34–87)
Sex, n	M, 86; F, 52	M, 21; F, 28	M, 30; F, 24
Anatomical location (%)			
Nose	26	43	31
Cheek	19	17	28
Ear	12	8	5
Forehead	9	7	17
Temple	6	0	9
Canthi (medial and lateral)	6	7	2
Peri-oral	6	0	0
Post-auricular	6	2	2
Eyelid	5	14	4
Scalp	4	2	0
Other	1	0	2
Closure method (%)			
Primary closure	46	6	40
Random and axial pattern flaps	42	53	48
Full-thickness skin grafts	8	4	8
Secondary intention healing	2	2	0
Reconstruction by allied specialty (Oculoplastic/Plastics/Maxillofacial)	2	35	4

Table 2 Patient feedback regarding the post-operative telephone call service

Positive feedback	Constructive feedback
'I didn't have any problems with the surgery but had problems with bleeding. Having the doctor call provides an opportunity to discuss any worries directly.' (New Zealand)	'Has a feel good factor but not essential.' (New Zealand)
'It's these little personal touches that make the whole experience a little less painful.' (New Zealand)	'Why not ask the patient whether they would like a phone call?' (New Zealand)
'The surgeon's call in the evening after surgery gave me the feeling that the person is caring for my wellbeing beyond all of my expectations. It reassured me that all was well and going according to plan. It relaxed me and I found it surprising that my surgeon cared about me so much.' (New Zealand)	'Should be commensurate with the scale of the surgery – for major surgery, telephone calls even 2–3 days post-surgery would be appreciated.' (New Zealand)
'These phone calls mean so much, especially as I do not live locally and feel vulnerable.' (New Zealand)	'The night of the surgery I was still full of painkillers and sedated so was not alert. Phone calls a day or so later would be better.' (New Zealand)
'I cannot thank you enough for the call. In today's struggling NHS, my family and I were amazed that the surgeon who had been working all day had taken the time to call to ask how I was. Thank you, so much.' (U.K.)	'Some patients may prefer the call the following day, although I valued the call on the evening after my surgery.' (U.K.)
'A very thoughtful and reassuring touch.' (U.K.)	
'The phone call was the icing on the cake. Very much appreciated.' (U.K.)	

surgery. The median Likert score in relation to overall satisfaction with MMS, although high, was lower than that of the study group (9 vs. 10). All patients without exception from both centres felt they would have found it useful if their surgeon had spoken with them or their relative on the night of their surgery and this was independent of prior experience of MMS or their place of residence. Importantly, 95% felt that receiving a TFU call from the surgeon would have further increased their overall

satisfaction with the procedure. Similar to the study group, the majority (74%) of the control group subjects felt their satisfaction would have been the same had the nurse called and the majority felt other specialties that perform surgery under local anaesthesia should adopt a post-surgery TFU service. Interestingly, four patients in New Zealand contacted the surgeon on the night of their surgery – two in relation to pain, one in relation to very minor bleeding and one in relation to a dressing that was uncomfortable; all these issues would have routinely been addressed with our standard TFU service.

Discussion

Patient satisfaction with treatment is important with approximately 90 000 complaints annually regarding care within the National Health Service, with 8000 of these related to communication.[6] Poor communication can have devastating consequences for the patient, the health care professionals involved and be financially costly to the health care organization if litigation is pursued. Indeed, previous studies have reported patients having greater satisfaction after treatment of nonmelanoma skin cancers in relation to the interpersonal manners of staff and communication rather than the technical quality of the surgeon.[7]

The study was conducted at two institutions, both of which are regional referral centres for MMS and cover a wide catchment area. The provision of MMS in New Zealand (with the exception of oculoplastic referrals) is in the private sector, whereas that provided in the U.K. is in the public sector. Adopting a post-MMS TFU call service may appear as a potentially labour-intensive, time-consuming process that allows patients direct access to the operating surgeon at any time. In fact, our study has shown that overall patient satisfaction was high despite TFU calls being brief. In addition, post-surgery TFU calls did not result in a high rate of unnecessary phone calls being made by patients, and the minority that did, did so with relevant concerns relating to their surgery. Interestingly, phone calls which the operating surgeon received from participants in the control group related to issues that would have ordinarily been dealt with by the routine post-MMS TFU service provided. Furthermore, patients recruited into the study who were undergoing MMS for the first time were unaware of the TFU service, and we feel that the element of 'surprise' that some patients may have experienced of the surgeon calling on the evening of their surgery may have contributed to the very high patient satisfaction levels we observed with the TFU service.

Notably, a significant proportion of patients stated that they would have been equally satisfied had they received a TFU call from another health care professional who was directly involved in their care, for example the nurse, rather than a member of the administrative or clerical team. Comparatively more patients in the U.K. appeared satisfied with a nurse-led TFU call service than their counterparts in New Zealand. This difference may be attributed to both institutions operating in different sectors with patients in New Zealand attending a private practice setting having greater expectations of the surgeon. Thus, in the public sector such as the NHS in the U.K., a nurse-led post-surgery TFU service, with escalation of calls to the dermatology registrar should the need arise, appears to be a practical, viable option, without necessarily compromising patients' perception of the TFU service. In addition, intuitively one may assume that private patients would be more likely to call the surgeon with unnecessary minor concerns, but we did not find this to be the case. However, a minority of patients did not find the TFU service helpful and, in this group, there appeared to be no correlation with their place of residence or the complexity of surgery or method of closure of the surgical defect.

Despite the inherent advantages of MMS in managing skin cancers of the head and neck, the process of taking several stages until closure of the surgical defect can be time consuming and potentially tiring for patients. This, coupled with pharmacological intervention given to patients perioperatively (opioid analgesia and anxiolytics), makes it less likely for patients to recall information imparted to them by health care professionals, despite being given verbal and written aftercare instructions. The TFU call service provides further opportunity for the patient, and indeed the relative, to seek clarification on issues they did not fully understand or recall. More importantly, it would provide the surgeon the opportunity to address any evolving complications such as early postoperative bleeding, which may result in improved patient outcomes.

Although the value of post-surgery TFU calls have been investigated in a variety of specialties, to our knowledge, this is the first study that has been conducted in a dermatological surgery setting, the findings of which have supported our practice of undertaking TFU calls post-MMS. The financial cost of mobile communication is negligible in comparison to the overwhelming benefits that are readily apparent for both patient and dermatologic surgeon alike. Genuine concerns relating to patients' possessing personal contact details of the health care professional could easily be overcome by utilizing a single generic 'on-call' mobile phone that all relevant health care staff of the organization could use. Our study has shown that patients find TFU calls post-MMS invaluable and they are associated with a high level of patient satisfaction. We feel that provision of such a service is a cost-effective, time-efficient method of maintaining high levels of patient satisfaction, irrespective of whether the procedure was performed in the public or private sector.

What's already known about this topic?

- Post-surgery telephone follow-up calls in nondermatology settings have been reported to improve overall patient satisfaction with care delivered.

What does this study add?

- This study demonstrates for the first time that patients find post-operative phone calls after Mohs micrographic surgery reassuring and that calls are associated with a high level of patient satisfaction.
- In our experience, providing patients with contact details of the operating surgeon, whether in a private or public setting, does not result in unnecessary or inappropriate telephone calls from the patient.

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