Does smoking cessation prior to elective spinal surgery lead to long-term smoking abstinence

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Smoking is a major health hazard. It is well known that there is a significant link between smoking and surgical complications. The rate of complications are twice as high in patients who continue to smoke post-operatively. Of importance, those patients that stop smoking before surgery are more likely to maintain abstinence post-operatively.

In 1996 our group noted that clinical outcomes following elective spinal surgery were inferior in those patients who continued to smoke despite being advised not to. We therefore commenced an enforced smoking cessation programme for elective spinal surgery. The Australian and New Zealand College of Anaesthetists recommended cessation of smoking six weeks prior to elective surgery to reduce peri-operative complications. We chose this time interval to be consistent with their guidelines.

At the time of the consultation to decide about surgery, patients were counselled about smoking and associated complications. They were informed smoking cessation was required a minimum of six weeks prior to their surgery. Patients were advised that if they were smoking at the time of hospital admission, their surgery would be cancelled. Patients were instructed to seek help for smoking cessation with their general practitioner or other agency. The consultation to confirm surgery, as well as the six-week smoking cessation requirement, included oral and written informed consent. Copies of these notes were sent to referring general practitioners, colleagues and other agencies where applicable.

While the short term benefits of smoking cessation and surgical outcome have been well documented in the literature, little is known about long-term cessation rates in patients required to stop smoking before major elective spinal surgery.

It was for this reason that the current audit was carried out. The project received full approval from the Ethics Committee, Mercy Hospital, Dunedin.

The senior author’s medical records from 2008 to 2012 (inclusive) were used to identify those patients that were smoking when the decision was made to proceed with surgery.

We decided to review patients that had been discharged from follow up for a minimum of 12 months in order to reduce the possible impact of the surgeon’s influence and the enforced requirement to stop smoking.

An initial request to take part in the audit was mailed to selected patients informing them of a telephone interview within two weeks.

In the five years outlined (2008 to 2012 inclusive), 1,161 patients underwent elective spinal surgery of which 180 (15.5%) were noted to be smokers. These patients were sent the letter of survey request; 106 patients responded. Of those, 16 refused to participate in an interview.

90 patients were interviewed by telephone (55 males/35 females).
60 (40 males/20 females) had recommenced smoking.
30 (15 males/15 females) had remained abstinent.
Thus, of the group interviewed, one third (33%) of patients remained abstinent following surgery (28% if those that refused the interview were presumed to be smokers). We noted females rather than males had a greater tendency to remain abstinent (43% vs 27%).

Long-term cessation rates referred to by the New Zealand Ministry of Health (MoH) web site as published by the Cochrane Library extend to six months duration. In our study, we noted 72% of the smoking group had recommenced within the first year post-surgery. By two years 89% had returned to their habit.

We therefore consider six-month follow up of smoking cessation rates to be too short and of little relevance. Long-term follow up to confirm sustained smoking abstinence should, at the very least, be a minimum of two years.

Cahill et al indicates long-term cessation is best achieved with “combined therapy”, namely medication and supportive counselling sessions. This approach has been shown to improve six month cessation rates to 25–30%. Of interest, in our study, only 52% of patients stated they sought help with smoking cessation.

The MoH web site notes, on average, smokers have 14 attempts at cessation before success. It is clear then that the enforced requirement to stop smoking before elective spinal surgery in our study was a powerful “one off” motivator.

Elective spinal surgery in New Zealand is usually funded by ACC, health insurers or in public hospitals by the Crown. It is important that tax-payer funded surgery is carried out to avoid complications, reduce costs and enable the greatest utilisation of scarce public resources. It is our belief that an enforced smoking cessation programme before elective surgery should become a standard of care for admission to hospital. A determined, unrelenting approach is important. “If you don’t stop smoking, you don’t get surgery”.

While smoking is a person’s freedom of choice, smoking cessation prior to surgery is not a moral or ethical dilemma but one of patient safety.

Competing interests: Nil.

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