Research and Best Practice

Clinical Guidelines: Smokers undergoing scheduled surgery: The Gold Standard Programme

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The overall objective of this guideline

Reducing the doubled risk of postoperative complications in smokers undergoing elective surgery. In addition, increasing the long-term quit-rate among surgical patients(1).

The clinical questions

1. How to identify smokers at increased complication risk after surgery?
2. How to document the risk in the medical record?
3. Which type of smoking cessation intervention programme should be recommended?

Target group

Daily smokers undergoing scheduled surgical procedures

The patient preferences: In general, the surgical patients have a very positive attitude to smoking cessation intervention (2-4), and their compliance to lifestyle intervention is especially high in the perioperative period (5).

Target users

Surgeons, anaesthesiologists, and other clinicians involved in the surgical pathway for their clinical information and recommendations on complication risks and related risk reduction and to support the shared clinical decision-making. Nurses and other health professionals responsible of smoking cessation intervention prior to surgery for support their choice of intervention programme.

Recommendations

1. Self-report

Self-reported daily smoking identifies smokers at increased risk. The literature shows that self-reported tobacco use is sufficient to identify the risk patients, and the simplest to use in clinical routines. This information might systematically underestimate the smoking to a minor degree; however, over-estimation has not been described, which means that the identified daily smokers definitely are risk patients (6-8).

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2. Documentation

Documentation in the medical record can be done easily through the HPH DATA Model that has been validated for surgical patients as well as other patients (9). This model has a specific code for daily smoking. Some clinicians use the ICD-10 for harmful smoking (DF 171), because they understand smoking as harmful in relation to surgery; others just write the number of daily cigarettes in the medical record. The related Health Promotion Activity Model can be used for documentation of the intervention. It has a specific code for intensive smoking cessation programmes (and another for the brief interventions among smokers) (10).

3. Intervention

The 6 to 8 weeks Gold Standard Programme (GSP) is the only smoking cessation intervention (see below) that significantly reduces the postoperative complication rate to about the half and significantly increases the continuous quit-rate at longer-term (above 20%). GSP can be added to the surgical pathway either 6-8 weeks before the operation date (11) or 4 weeks before and 4 weeks after (12). The quit rate at the time of the operation is more than 50%. Other less intensive and briefer programmes have been tested without effect on those outcomes (13), while some may have an intermittent and minor effect on the smoking it-self (14).

GSP describes manual based smoking cessation intervention performed by trained staff. The introduction often involves a motivational dialogue followed by a structured patient education programme, which includes teaching and training or handling temptations and risk situations, relapse prevention, dependency, nicotine replacement therapy (free of charge) and withdrawal symptoms. In addition the programme includes setting a quit date and planning for the future. The patients are followed up for smoking status at the end of the programme and again after 6 and/or 12 months. The follow-up also includes evaluation of the patient satisfaction (15).

Indicators for registration

They relate directly to WHO Standard II and III for Health Promotion in Hospitals (16):
- Documentation of smoking status at first contact to hospital or health services
- Information given (increased risk for smokers, intervention and the following risk reduction),
- Start GSP (or referral according to local guidelines)
- Outcome (quit smoking)

The indicators should be followed up over time through audits of the medical records.

References

(1) AGREE II Instrument May 2009. www.agreetrust.org (Assessed May 24-2011)
(2) Boel T, Kannegaard PN, Goldstein H, Andersen T. Smoking, alcohol over-consumption and obesity before elective surgery. Prevalence and patient motivation for risk reduction. Ugeskr Laeger 2004;166:3297-3300.
(3) Moller AM, Villebro NM. Preoperative smoking intervention: What do patients think? A qualitative study. Ugeskr Laeger 2004;166:3714-8.
(4) Lindstrom D, Tønnesen H, Adami J. Smoking cessation in surgical interventions. Dramatic drop in the risk of postoperative complications. Lakartidningen 2010;2:2634-5.
(5) Tønnesen H, Nielsen PR, Lauritzen JB, Møller AM. Smoking and alcohol intervention before surgery: evidence for best practice. Br J Anaesth 2009;102:297-306.
(6) Warner DO. Perioperative abstinence from cigarettes: physiologic and clinical conse-quences. Anesthesiology 2006;104:356-67.
(7) Etter JF, Perneger TV. Measurement of self reported active exposure to cigarette smoke. J Epidemiol Community Health 2001;55:674-80.
(8) From AM, Herlitz J, Berndt AK, Karlsson T, Hjalmarson A. Are patients truthful about their smoking habits? A validation of self-report about smoking cessation with biochemical markers of smoking activity amongst patients with ischaemic heart disease. J Intern Med 2001;249:145-51.
(9) Tønnesen H, Svane J, Lenzi L, Kopecky J, Suurorg L, Bukholm IRK, et al. Handling Clinical Health Promotion in the HPH DATA Model: Basic Documentation of Health Determinants in Medical Records of tobacco, malnutrition, overweight, physical inactivity & alcohol. Submitted to BMC Med Inform Decis Mak, 2011.
(10) Tønnesen H, Christensen ME, Groene O, O'Riordan A, Simonelli F, Suurorg L, et al. An evaluation of a model for the systematic documentation of hospital based health promotion activities: results from a multicentre study. BMC Health Serv Res 2007;7:145.
(11) Møller AM, Villebro N, Pedersen T, Tønnesen H. Effect of preoperative smoking intervention on postoperative complications: a randomised clinical trial. Lancet 2002;359:114-7.
(12) Lindström D, Azodi OS, Wladis A, Tønnesen H, Linder S, Nasell H, Ponzer S, Adami J. Effects of a perioperative smoking cessation intervention on postoperative complications: a randomized trial. Ann Surg 2008;248:739-45.
(13) Thomsen T, Tønnesen H. Review: Long-term effect of a perioperative smoking cessation programme. Clin Health P 2011;1:22-26.
(14) Thomsen T, Villebro N, Moller AM. Intervention for preoperative smoking cessation (review). Cochrane Database Syst Rev 2010 (7).
(15) www.SCDB.dk (Assessed May 24-2011)
(16) Groene O. (Ed.). Implementing health promotion in hospitals: Manual and self-assessment forms Copenhagen, WHO Regional Office for Europe. 2006.