Should smokers be refused surgery?

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YES

Failure to quit smoking before certain elective procedures confers such clinical detriment that to proceed to surgery is ill judged. When all other clinical features are identical, costs are increased and outcomes are worse in a smoker than in a current non-smoker. In healthcare systems with finite resources, preferring non-smokers over smokers for a limited number of procedures will deliver greater clinical benefit to individuals and the community. To fail to implement such a clinical practice in these select circumstances would be to sacrifice sensible clinical judgment for the sake of a non-discriminatory principle.

Smoking up to the time of any surgery increases cardiac and pulmonary complications,[1 2] impairs tissue healing,[3] and is associated with more infections[3 4 5 6 7] and other complications at the surgical site.[4 7] These adverse effects compromise the intended procedural outcomes and increase the costs of care. Therefore, as long as everything is done to help patients to stop smoking, it is both responsible and ethical to implement a policy that those unwilling or unable to stop should have low priority for, or be excluded from, certain elective surgical procedures.

Such a policy should be limited to procedures where the evidence of harm is strongest. These include plastic and reconstructive surgery[4 5 7] and some orthopaedic surgery.[6 8] A study of experimental sacral incisions of 12-18 mm found that infection occurred in 12% of smokers and 2% of non-smokers.[3] Infection rates in smokers who had quit for four weeks were similar to those in non-smokers. In a study of wound and other complications after hip or knee arthroplasty, no smoker who had quit developed a wound infection compared with 26% of ongoing smokers and 27% of those who had simply reduced tobacco use. Overall complications were reduced to 10% in those who had quit smoking compared with 44% in those who continued.[6]

The higher rate of infection is only one symptom of poor tissue repair. Independent of wound infection, after elective repair of an anterior cruciate ligament, smokers have objectively poorer outcomes and are less likely to return to their preinjury level of sports participation.[8]

Indirect costs of treating smokers

With arthroplasty, some of the wound infections were limited to erythema, but 13% of smokers required re-operation because of infection.[6] Such infections have been shown to prolong total hospital stay, double readmission rates, and quadruple costs of orthopaedic surgery.[9] This represents a 38% increase in the direct cost of care for each smoker having surgery. In the arthroplasty study the intervention group had an average length of hospital stay of 14 rather than 11 days.[6]

Increased use of hospital beds and associated costs mean less opportunity to treat other patients. On the basis of these data, five non-smokers could be operated on for the cost and bed use of four smokers and the non-smokers' surgical outcomes would be better. Well informed smokers, unwilling or unable to quit, might assume an increased risk for themselves, but the decision is not theirs alone when it can indirectly affect others. Then, the community must involve itself.

With surgery that is done for purely cosmetic purposes, the increase in the risk and consequences of wound infection or fat necrosis from smoking is unacceptable and surgery is illogical.[5] In reconstructive surgery, whether breast reconstruction after mastectomy or as part of head and neck cancer surgery, smoking substantially increases the risk of wound infection, flap necrosis, and fat necrosis.[3] If a patient wants breast reconstruction at the time of mastectomy, the development of wound infection or flap necrosis will delay adjuvant chemotherapy or radiotherapy. Therefore, unless reconstruction is required as part of essential surgery that cannot be delayed, it is good policy not to offer reconstruction until the patient has stopped smoking.

Refined policy

Clearly these data on outcomes have some limitations.[10] Some studies compare smokers with never smokers in situations where smoking related comorbidity is an important factor, such as cardiac and pulmonary complications. I have deliberately avoided this area in my discussion. Another problem is that studies use variable preoperative intervention periods and have not always validated smoking status by, for example, measuring exhaled carbon monoxide or cotinine. A study comparing groups randomised to ongoing, uninfluenced smoking with an intervention group would now be unethical. The question is whether four, six, eight, or more weeks of cessation are required for optimal benefit offset against hazards and inconvenience of surgical delay.

Smoking causes disease that may require surgery, but smoking as a cause of disease is not the issue for debate. Individuals should be treated equitably regardless of the cause of their disease. It is also true that smoking is rarely the only risk factor for a poor outcome, and smoking should not be considered to the exclusion of all others. Smoking is, however, unique in that its associated risk can be reduced substantially within a short period.

Therefore, it is not so much the principle that should be debated here but the practical aspects of implementation and exceptions that might apply. Special care must be taken to ensure that the risks and benefits of smokers with mental illness are well considered. The risks of potentially curative treatment for head and neck surgery in a smoker may be fully acceptable compared with the consequences of not operating. In the same way, a smoker awaiting hip replacement who has pain walking 100 metres but lives in a supportive social context is not the same as another who, without surgery, may be forced into nursing home care. A properly implemented policy would require that non-smoking status be validated but, for the potential benefits, this is justified.

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Last year a primary care trust announced it would take smokers off waiting lists for surgery in an attempt to contain costs. **Matthew Peters** argues that denying operations is justified for specific conditions but **Leonard Glantz** believes it is unacceptable discrimination

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NO One of the noblest things about the profession of medicine has been its single minded devotion to patients. Doctors routinely treat patients who are despised by the society in which they live—enemy troops, terrorists, murderers. Given this, it is astounding that doctors would question whether they should treat smokers. The issue for doctors is whether they will allow the current antismoking zeal in the West to infect their practice and undermine the doctor-patient relationship.

In a surprisingly short time smokers have gone from being the victims of tobacco companies to perpetrators of wrongs against others. Secondhand smoke used to be an annoyance but is now treated as a poisonous gas. Smokers' diseases were previously seen as the result of a heartless tobacco industry preying on the young and supplying drugs to those it addicted. Tobacco companies used to win every lawsuit brought against them by diseased smokers because they successfully argued that smokers knowingly and voluntarily assumed the risks of smoking.

But the 1988 US Surgeon General's report on the addictive nature of cigarette smoking gave plaintiffs' lawyers a way to rebut this argument.[1] Smokers could now be portrayed as enslaved by the tobacco companies and incapable of stopping smoking because of their addiction. As a result, smokers did not voluntarily incur the risk of smoking but rather did so involuntarily because of their addiction. It is not without some irony that surgeons who refuse to perform operations on patients unless they stop smoking make the same argument that cigarette companies used—if smokers don't want to incur the adverse effects of smoking, including refusal of surgery, they should quit.

Individual decision

Assuming we can accurately determine who falls into the class of smoker (is it someone who smokes 40 cigarettes a day, 10 a day, or the occasional cigar?), the idea of doctors treating all smokers the same way runs counter to the practice of medicine. This requires an evaluation of each patient to determine the appropriateness of a treatment regimen. Evidence exists that smokers are at an increased risk of postsurgical complications compared with non-smokers, and when smokers stop smoking before surgery their risks of complications decrease.[2] But those same data show that most smokers who have surgery have no complications, and a policy denying all smokers access to surgical procedures arbitrarily denies beneficial treatment to those who would have had no complications.

Withholding surgery from smokers also distorts the modern doctor-patient relationship, which is based on partnership. Doctors determine the risks and benefits of treatment and inform the patients of these facts, and patients then decide whether to incur the risks to gain the benefits. This applies equally to smokers and non-smokers. Doctors should certainly inform patients that they might reduce their risks of postsurgical complications if they stop smoking eight weeks before the procedure. There is every reason to believe many patients would follow their doctors' advice. The question is, "Should the price of not following the doctor's advice be the denial of beneficial surgery?" Should someone who was crippled by arthritic knee pain be denied surgery because they would knowingly and willingly take an increased risk of incurring postsurgical complications? If the decision whether to take an increased risk is not left to patients, they are likely to lie to their doctors about their smoking. This deception, of course, will make us unable to help smokers who wish to stop but fear the repercussions of disclosing their smoking to their doctors.

Cost arguments

An argument made to support the discriminatory non-treatment of smokers is that increased complications lead to additional expenditures that could be avoided if smokers would simply stop smoking. But why focus our cost saving concerns on smokers in the context of surgery? Do patients have a general obligation to get healthy as a condition of receiving treatment? Patients are not required to visit fitness clubs for eight weeks, lose 25 pounds, or take drugs to lower blood pressure before surgery.

Many non-smokers cost society large sums of money in health care because of activities they choose to take part in. "Baby boomers" in the United States lost 488 million days of productivity in 2002 because of sports injuries. In 1991-8 sports related injuries in this age group increased 33% and cost about $18.7bn (£9.6bn; €14bn) a year in medical costs alone.[3] We could reduce healthcare expenditure by simply refusing to pay for treating any injuries related to voluntary participation in sports. Let them suffer their painful knee condition which is entirely their fault. Indeed, if we treat a sports injury that person is likely risk incurring future costly sports injuries. But we don't even think this let alone suggest it.

Discriminating against smokers has become an acceptable norm.Indeed, at least one group of authors who believe smokers should be refused surgery blithely admits that it is "overtly discriminatory."[4] The suggestion that we should deprive smokers of surgery indicates that the medical and public health communities have created an underclass of people against whom discrimination is not only tolerated but encouraged. When the World Health Organization announced that it would no longer employ anyone who smokes, public health and medical communities did not respond to this act of blatant bigotry.[5 6] Similarly, it is shameful for doctors to be willing to treat everybody but smokers in a society that is supposed to be pluralistic and tolerant. Depriving smokers of surgery that would clearly enhance their wellbeing is not just wrong—it is mean.

References are in the full version on bmj.com

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