



Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com



ORIGINAL ARTICLE

A preoperative cotinury test for abdominoplasty reduces peri-operative complications

Un test de cotinurie en préopératoire d'une abdominoplastie réduit les complications postopératoires

F. Delaunay^{a,*}, D. Coquerel-Beghin^b, G. Magalon^c,
S.R. Cohen^d, D. Casanova^e, J. Niddam^f, P.-Y. Milliez^b,
C. Peillon^g, V. Delpierre^a, I. Auquit-Auckbur^b

^a Department of plastic, reconstructive and aesthetic surgery, Le Belvédère hospital, 76130 Mont-Saint-Aignan, France

^b Department of plastic and hand surgery, university hospital of Rouen, 76000 Rouen, France

^c Department of plastic, reconstructive and aesthetic surgery, clinique Phaenicia, 13005 Marseille, France

^d Department of plastic, reconstructive and aesthetic surgery, FACES+, San Diego, California 92121, USA

^e Department of plastic, reconstructive and aesthetic surgery, La Conception hospital, AP-HM, 13005 Marseille, France

^f Department of plastic, reconstructive and aesthetic surgery, European hospital, 13000 Marseille, France

^g Department of thoracic surgery, university hospital of Rouen, 76000 Rouen, France

Received 23 January 2018; accepted 15 March 2018

KEYWORDS

Smoking;
Smokers;
Abdominoplasty;
Cotinury test;
Plastic surgery;
Healing delay;
Wound healing

Summary

Background. — Smoking induces complications in plastic surgery, in particular wound healing delays. Despite a 4-weeks' abstinence asking before and after surgery, some patients denied or hid their consumption. The aim of this study was to evaluate the effectiveness of a cotinury detection test in terms of improvement in outcomes after an abdominoplasty.

Material and methods. — This retrospective cohort study included patients who underwent an abdominoplasty with umbilical transposition and lipoaspiration. Current smokers were asked to stop smoking 4 weeks before and after surgery. After 2013, we performed a preoperative cotinury test for patients having abdominoplasty, with a cancellation of surgery in case of

* Corresponding author. Department of Plastic, Reconstructive & Aesthetic Surgery, 72, rue Louis-Pasteur, 76130 Mont-Saint-Aignan, France.
E-mail address: flore.delaunay@yahoo.fr (F. Delaunay).

<https://doi.org/10.1016/j.anplas.2018.03.004>

0294-1260/© 2018 Elsevier Masson SAS. All rights reserved.

positive result. We analyzed the test's effectiveness on delayed healing and on other complications.

Results. — Two hundred and thirty-five patients were included; 80 were tested and 21,3% had a positive test. There was significantly less delayed healing in the "screening" group than in the "no screening": 20,3% versus 41,5% ($P = 0,002$). Alike, complications were significantly less frequent in the "screening" group than in the "no screening": 18,1% versus 42,3% ($P < 0,001$).

Conclusion. — The routine use of the cotininuric test in preoperative abdominoplasties significantly reduces risk of delayed healing and other serious complications. It is an objective test, which is simple, quick and non-invasive. Smoking cessation must be at least 4 weeks before and after the surgery. Following medical advice to cease smoking by the surgeon and anesthetist, referral to an appropriate tobacco-addiction specialist clinic may be helpful for the patient who has difficulty stopping smoking.

© 2018 Elsevier Masson SAS. All rights reserved.

MOTS CLÉS

Tabagisme ;
Fumeurs ;
Abdominoplastie ;
Test de cotininurie ;
Chirurgie plastique ;
Retard de cicatrisation ;
Cicatrisation cutanée

Résumé

Introduction. — Le tabagisme induit des complications en chirurgie plastique, en particulier des retards de cicatrisation. Malgré une demande de quatre semaines d'abstinence avant et après l'intervention, les patients ont tendance à sous-estimer ou cacher leur consommation. Le but de cette étude était d'évaluer l'efficacité d'un test de détection de cotinine urinaire en termes d'amélioration de la survenue de complications après abdominoplastie.

Matériel et méthodes. — Cette étude de cohorte rétrospective incluait des patients opérés d'une abdominoplastie avec transposition de l'ombilic et lipoaspiration. Il était demandé aux fumeurs actifs d'arrêter leur consommation quatre semaines avant et après l'intervention. À partir de 2013, un test de cotininurie était réalisé avant l'intervention, avec annulation de la chirurgie en cas de positivité du test. Nous avons analysé l'efficacité de la mise en place de ce test sur les retards de cicatrisation et les autres complications postopératoires.

Résultats. — Deux cent trente-cinq patients ont été inclus ; 80 ont été testés et 21,3 % ont présenté un test positif. Il y avait significativement moins de retards de cicatrisation chez nos patients du groupe « après 2013 » que dans le groupe « avant 2013 » 20,3 % versus 41,5 % ($p = 0,002$). Les complications étaient également significativement moins importantes 18,1 % versus 42,3 % ($p < 0,001$).

Conclusion. — L'utilisation habituelle du test de cotininurie en préopératoire des abdominoplasties réduit significativement les risques de retards de cicatrisation et autres complications. Il s'agit d'un test objectif, simple, rapide et non invasif. Un arrêt de la consommation tabagique pendant quatre semaines avant et après l'intervention est impérative. Un conseil médical réalisé par les chirurgiens et les anesthésistes est indispensable, et un recours aux tabacologues doit être favorisé pour les patients ayant des difficultés au sevrage.

© 2018 Elsevier Masson SAS. Tous droits réservés.

Introduction

Healing issues are a major concern for plastic surgeons and their patients. Given the elective nature of aesthetic surgery, it is even more critical to eliminate any potential harm to the patient. Currently, in France, 33% of population are « active » smokers, despite the decades of evidence of smoking's deleterious effects on health. Since the middle of the 19th century, studies proved that active and passive smoking increase the frequency of postoperative complications. As early as 1977, Mosely and Finseth [1,2] described delays in vascularization and subsequent healing issues. More recent studies show that smoking increases delayed healing at least 2-fold [3–7]. Tobacco components induce an acute vasoconstriction, microthrombi, and platelet aggregation. Nicotine stimulates the sympathetic nervous system and induces vasoconstriction to the skin, with diminished capillary flow. Carbon monoxide production as a byproduct of smoking leads to tissue hypoxia because of carbon monoxide's stronger

affinity for hemoglobin than oxygen. The ultimate effect of these phenomena induces healing problems. It has been demonstrated that the earlier smoking is stopped before surgery, the less postoperative healing problems appear [3,8]. For few years, international societies advised smoking cessation before surgeries, but just because patients are warned of the deleterious effects of smoking prior to major surgery, many patients still knowingly ignore medical counsel and continue to smoke [6,9–12].

How to manage patients who do not realize the impact of their tobacco consumption and mitigate their risks is important to both the patient as well as the operating surgeon. Manassa, in 2003, noticed that despite strong advice of stop smoking 2 weeks before and after abdominoplasty, 85.3% smoked until the operative day, and 58.8% continued after surgery [5]. It has been reported that significantly more healing problems occurred in smokers having breast reduction, and that 75% of patients did not stop their consumption despite the surgical warning of

Download English Version:

<https://daneshyari.com/en/article/8710768>

Download Persian Version:

<https://daneshyari.com/article/8710768>

[Daneshyari.com](https://daneshyari.com)