

RESULTS FROM A CARDIOVASCULAR PREVENTION CAMPAIGN IN PERSONS AGED 45-64 YEARS

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SUMMARY The aim of this study was to screen a target population for modifiable cardiovascular risk factors and to find out how treatment goals were achieved in the treated population. All inhabitants aged between 45 and 64 years in the town of Lede in Belgium were invited by the local authorities for a free health check-up. In total, 629 subjects were screened. Total cholesterol ≥ 250 mg/dl or triglycerides ≥ 200 mg/dl was found in 38%, increased fasting glucose (≥ 110 mg/dl) in 8.6%, diabetes in 2.8%, increased systolic blood pressure (SBP) (≥ 140 mmHg) in 22% and increased diastolic blood pressure (DBP) (≥ 90 mmHg) in 8%. The low-density lipoprotein cholesterol (LDL-C) target level of 115 mg/dl was attained in 13% of treated women and 34% of treated men. Target levels for SBP and DBP were attained in 40% and 75% respectively of those treated. Fasting glucose < 120 mg/dl was found in 33% of the diabetic participants. (*Int J Clin Pract* 2003; **57**(5): 430-434)

In previous decades there has been conclusive evidence about non-modifiable cardiovascular risk factors such as age, gender and cardiovascular family history. Although there is also considerable evidence on modifiable risk factors such as hypertension, diabetes, low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), smoking and obesity, many individuals with these risk factors are undiagnosed, insufficiently treated or not treated at all. One study revealed that only 50% of hypertensive men in Scotland were diagnosed. Of those who had been diagnosed as hypertensive only 50% were treated and only 50% of the latter reached treatment target levels.¹ Similar figures could be expected for the other modifiable risk factors.

The aim of this study was to assess the prevalence of five modifiable cardiovascular risk factors in a sample of the population aged between 45 and 64 years who were willing to be checked. Secondly, the achievement of target levels was measured in the treated participants.

MATERIALS AND METHODS

Study population and design

The study was carried out in 1999 in the small rural town of Lede in Belgium. All inhabitants aged 45-64 years were invited by the local authorities to visit their general practitioner (GP) for a free health check-up and blood test. In total, 4363 inhabitants (2186 men and 2177 women) received a written invitation. An information campaign was launched to increase recruitment. All 15 GPs in Lede agreed to participate in the screening. They were all informed about the campaign and received the study protocol.

Physical examination included registration of blood pressure, weight and height. Fasting blood analysis included the

determination of glycaemia, total cholesterol (TC), HDL-C, LDL-C and triglycerides (TG).

For glucose and plasma lipid measurements venous blood samples were collected after the subjects had fasted for 12 hours. Serum TC, TG and HDL-C were measured enzymatically. LDL-C levels were calculated using the Friedewald formula, unless TG were > 300 mg/dl, in which case LDL-C levels were measured enzymatically. In accordance with Belgian guidelines for clinical biology, the performance of local laboratories is regularly subjected to internal and external quality control. Cardiovascular history and treatment were recorded. Smoking behaviour was the only lifestyle habit that was recorded.

Screening goals

The Joint National Committee on prevention, detection, evaluation, and treatment of high blood pressure defines hypertension as systolic blood pressure (SBP) ≥ 140 mmHg or diastolic blood pressure (DBP) ≥ 90 mmHg.²

According to the adult treatment panel (ATP) III guidelines, TC < 200 mg/dl is desirable and ≥ 240 mg/dl is high; LDL-C ≥ 130 mg/dl is borderline high and LDL-C ≥ 160 mg/dl is high; TG ≥ 150 mg/dl is borderline high and TG ≥ 200 is high.³ The Belgian Institute for Health Insurance provides reimbursement of lipid-lowering drugs for participants with fasting TC ≥ 250 mg/dl or TG ≥ 200 mg/dl, but only when fasting levels do not fall below these values after a fat-lowering diet of at least three months. We therefore used these cut-off points to detect untreated participants at risk. It is remarkable that cardiovascular risk factors are not taken into account for reimbursement in Belgium.

Type 2 diabetes has been defined as fasting plasma glucose of ≥ 126 mg/dl on more than one occasion.⁴ Because we had

visible and palpable swelling near the penoscrotal junction on the right side. This was explored under local anaesthesia, the clot evacuated and the torn cavernosum repaired with interrupted 4/0 vicryl. He was discharged the same day. Eight months later he continues to have normal erections.

DISCUSSION

Most surgeons still use the degloving, circumferential, sub-coronal incision to locate and repair the fracture.^{3,4} In fact, in the largest reported series of 68 cases, Asgari *et al*³ made such an incision, degloved the entire penis and always found the tear in the proximal third of the corpus cavernosum. Moreover, the tear is almost always unilateral, small (less than half the circumference of the corpus) and transverse.⁵ Logically, therefore, it seems unnecessary to deglove the entire penis simply to locate a small, proximal, unilateral tear, especially when such extensive dissection must injure more blood vessels and nerves, traumatise more tissue, take longer to perform and require more anaesthetic than a small incision directly over the fracture site. In fact, this extensive dissection is associated with a high complication rate of skin necrosis and sepsis in some 66% of patients.⁶ We have previously reported that, with careful clinical examination, a 'rolling sign' at the fracture site can be elicited, facilitating simple, direct repair of the torn cavernosum.^{7,8} In the unusual situation where extensive swelling makes accurate clinical localisation difficult, delaying the repair for 7-12 days facilitates identification of the fracture site.

When the rigid corpus cavernosum is torn there is rapid extravasation of blood. It appears that most of the clot elements are trapped by Buck's fascia and are localised at the fracture site, whereas the rest of penile swelling is due largely to non-cellular elements and oedema. The oedema

resolves much more rapidly than the clot at the fracture site, thus producing a well circumscribed obvious swelling over the rent in the corpus cavernosum. The 'rolling sign' is then easily elicited. Because the overlying skin remains mobile, the surgeon can choose the site of skin incision by rolling the skin distally over the fracture site. Thus, most repairs can be performed on scrotal skin or at the penoscrotal junction, leaving the penis itself free of scars.

CONCLUSION

We recommend immediate simple direct repair of the fractured penis when the injury site can be accurately identified. If, however, such localisation is prevented by extensive swelling, and ultrasonography is not available, we recommend a delay of 7-12 days to facilitate easy identification and repair of the torn corpus cavernosum.

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