Identification of alcohol abuse in adults and elderly in a Dutch hospital

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Research question: Is routine laboratory screening on alcohol abuse (MCV, g-GT and CD-tect) indicated to improve detection rates of alcohol abuse?

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON35844

Source
ToetsingOnline

Brief title
I A A

Condition

- Other condition

Synonym
alcohol abusis

Health condition

verslaving

Research involving
Human

Sponsors and support

Primary sponsor: Sint Elisabeth Ziekenhuis
Source(s) of monetary or material Support: vakgroep psychiatrie

Intervention

Keyword: abusis, alcohol, identification

Outcome measures

Primary outcome

Measurements

After acquiring oral consent, patients will be interviewed with the aid of a lifestyle questionnaire.

This questionnaire contains the following 10 questions: How much social contacts do you have? Are you environmentally responsible? How often do you sport? Do you watch tv? If yes, how often and what kind of programs? Do you have a cultural activity? If yes, what kind of? Do you read the paper or books? If yes, witch one? Do you go out? If yes, what kind of activities? Do you smoke?if yes, what and how much? Do you drink alcohol? If yes, AUDIT-C screening follows. Do you use any kind of drugs?. Each question of the AUDIT-C contains 5 possible answers, scoring 0-4 points per question. The maximum score is 12. A score of >= 4 or more identifies 86% of men who report drinking above recommended levels. A score of >= 4 identifies 84% of women who report hazardous drinking[14] .

To avoid selection bias official informed consent will be provided after questioning. Afterwards a blood sample will be taken from the internal medicine patients, independent of the results of the questionnaire, for laboratory screening on levels of gGT, CDT and MCV. The accuracy of these markers is affected by various factors such as non-alcoholic liver damage, use of medications or drugs, and by metabolic disorders. gGT is the most commonly used

biochemical measure of drinking. Chronic alcohol use of 4 or more beverages a day for 4 to 8 weeks significantly raises levels of this blood protein. CDT values become elevated substantially earlier (1-2 weeks) in response to prolonged excessive drinking. MCV increases with excessive alcohol intake after 4 to 8 weeks. It can detect evidence of earlier drinking after a long period of abstinence. The sensitivity of this marker is too low to justify its use as a single indicator. However, it has higher specificity compared with other tests[17,18].

Evaluation of clinical records

Furthermore, the medical records referring to current admission and medical history of alcohol abuse will be reviewed. Collected data must include: gender, age, reason for admission or kind of surgery, earlier admissions for the same reason, earlier pre- or perioperative complications, presence of alcohol-related somatic disease, if and how alcohol drinking behaviour is mentioned (units per week or otherwise graded) and presence of psychiatric disorder(s).

Secondary outcome

none

Study description

Background summary

Introduction and background
Currently excessive alcohol use is becoming a big problem for the healthcare. For greater part this is attributed to the drinking behaviour of adults and elderly. Not only the number of users is increasing, but also the amounts per

person are getting bigger. Particularly last given is a problem in the cure- and care-sector in the Netherlands[1,2]. Previous studies show that alcohol abuse can contribute to more admissions and (re)hospitalization[3]. Especially patients with unexplained somatic symptoms, preoperative patients or elderly, whether or not using multiple medication, belong to this category[4]. Most known morbidities of alcohol consumption, whether or not postoperative, are: infections, bleeding disorders, need for ventilator support, cognitive dysfunction [5,6,7]. Therefore, it is very troublesome to learn from prior studies that alcohol abuse commonly remain undetected thereby also untreated [8-11]. The degree of under diagnosis is attributed to diverse factors, such as depression, dementia, physical changes associated with age, life events, late onset of alcoholism and lack of screening. In addition, elderly patients may find it difficult to disclose their alcohol intake and relatives may deny the existence of the problem[4,12]. Given above information, it seems reasonable to investigate if extensive screening on internal medicine admissions and of preoperative patients can lead to improvement of detection rates and treatment of excessive alcohol use.
It has been shown that the Alcohol Use Disorders Identification Test (AUDIT) is a valid and simple way for detection of high risk patients. The AUDIT-C is a shortened version of the AUDIT. It consists of the first 3 questions of the AUDIT questionnaire and is equal in accuracy to the full AUDIT. This questionnaire is applicable to: men, women, elderly, drug users, internal medicine inpatients, other cultures and the unemployed[13-16]. A more objective test is laboratory screening on carbohydrate-deficient transferrin (CDT), gGT and MCV. This test is being used for detection of excessive alcohol use in de past week or as follow up during treatment and is mostly applied in the secondary care[16]. Clinical laboratory procedures provide objective evidence of problem drinking.

Study objective

Research question: Is routine laboratory screening on alcohol abuse (MCV, g-GT and CD-tect) indicated to improve detection rates of alcohol abuse?

Study design

Methods
Study design
The study will be conducted at the internal medicine ward and the preoperative assessment clinic of a general dutch hospital, performed and supervised by the compartment of psychiatry. For this diagnostic and cross-sectional study data will be collected during 9 weeks. We want to investigate if the combination of a lifestyle questionnaire, including the AUDIT-C, and laboratory screening is indicated to increase detection rates of alcohol abuse in the secondary care. The intention is to cover up the alcohol related questionnaire with general lifestyle questions, to not lay focus on their alcohol drinking behaviour. To

accomplish this adult patients, above the age of 18 years, admitted to internal medicine or undergoing preoperative assessment screening will be consecutively included. Patients, admitted to internal medicine, who didn*t stay at least 24 hours and patients with poor understanding of the dutch language will be excluded.

Measurements
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This questionnaire contains the following 10 questions: How much social contacts do you have? Are you environmentally responsible? How often do you sport? Do you watch tv? If yes, how often and what kind of programs? Do you have a cultural activity? If yes, what kind of? Do you read the paper or books? If yes, witch one? Do you go out? If yes, what kind of activities? Do you smoke?if yes, what and how much? Do you drink alcohol? If yes, AUDIT-C screening follows. Do you use any kind of drugs?. Each question of the AUDIT-C contains 5 possible answers, scoring 0-4 points per question. The maximum score is 12. A score of >= 4 or more identifies 86% of men who report drinking above recommended levels. A score of >= 4 identifies 84% of women who report hazardous drinking[14] .
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Analysis
Analysis

Data of the 2 wards, internal medicine and preoperative assessment clinic, will be analysed separately. If patients are not reported as high risk drinkers, in

their medical record, or are not given advise to withhold or moderate their drinking, I will report these findings as acceptable drinking behaviour for the physician. All variables and collected data will be processed using SPSS software. A quantitative analysis will be done using descriptive statistics, with the intention to present frequencies of alcohol use, abuse and *undetected cases* and to describe the characteristics of the population.
A correlation analysis will be used to describe the relationship between the outcome values of the AUDIT-C questionnaire and the anamnesis of the physician concerning alcohol abuse. Because the data we use has an ordinal level, the *Spearman rank order correlation* is best applicable here. For further diagnostic analysis the sensitivity and specificity of the laboratory markers gGT, CDT and MCV will be calculated for detecting high-risk drinking. Receiver operating characteristic (ROC) analysis will be used to assess the performance of the markers across the full range of potential cut-off values. ROC curves plot a scale*s ability to detect true positives against the rate of false positives. The area under the ROC curve is used as a measure of overall test accuracy. For each marker (CDT, GGT, and AST), separate ROC analyses will be conducted to compare those drinking at high-risk levels against those at low-risk levels, measured by AUDIT-C.

Study burden and risks

nvt

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

all patiënts > 18 year
screening PPO
admitted internal medicine ward
permission

Exclusion criteria

no informed consent
no dutch language
stay shorter than 24 hours

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-04-2011
Enrollment:	200
Type:	Actual

Medical products/devices used

Registration:	No

Ethics review

Approved WMO Date:	22-06-2011
Application type:	First submission
Review commission:	METC Brabant (Tilburg)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL36308.008.11