A case-cohort study to identify risk factors for cardiovascular disease in testicular cancer survivors

Published: 18-06-2014
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The aim of this study is to identify risk factors for development of cardiovascular disease after TC treatment.

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

Summary

ID

NL-OMON40337

Source
ToetsingOnline

Brief title
TACkLE-study - Tackling Adverse Chemotherapy-associated Late Effects

Condition

- Other condition
- Coronary artery disorders
- Reproductive neoplasms male malignant and unspecified

Synonym
cardiovascular disease in testicular cancer survivors

Health condition

hartfalen, metabool syndroom

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: KWF Kankerbestrijding

Intervention

Keyword: Cardiovascular disease, Risk factors, Survivor, Testicular cancer

Outcome measures

Primary outcome

We will evaluate the independent and joint effects of disease- and treatment characteristics and the (components of the) metabolic syndrome on development of cardiovascular disease.

Secondary outcome

Secondary study parameters are biochemical markers (a.o. vWF, urinary albumin/creatinine ratio, hs-CRP), hypogonadism (testosterone, LH, FSH, estradiol levels), presence of relevant polymorphisms in genomic DNA, telomere length, and circulating platinum levels (only in participants treated with chemotherapy); in addition quality of life will be assessed. In the UMCG additional measurements for subclinical vascular damage will be assessed by evaluating intima media thickness (IMT), arterial stifness and skin autofluorescence (SAF) as measure of advanced glycation end products (AGEs).

Study description

Background summary

Testicular cancer (TC) is a rare disease, which mostly affects young men aged 15-35 years. Their life expectancy has greatly improved due to the introduction of platinum-containing chemotherapy for disseminated TC in the late 1970s.

Given the good prognosis of TC nowadays, prevention or early detection of late adverse effects of TC treatment has become increasingly important. Current literature suggests that TC treatment, and specifically exposure to platinum agents, is associated with increased risk of cardiovascular morbidity and mortality. The precise role of treatment components like platinum in the pathogenesis of cardiometabolic changes and cardiovascular disease (CVD) warrants further investigation, since it is not known if CVD develops through direct platinum-induced damage of the vascular wall or by mediation through cardiometabolic changes. A more profound insight into pathophysiologic mechanisms and identification of risk factors for CVDs is needed to facilitate development of preventive strategies and to optimize survivorship care.

Study objective

The aim of this study is to identify risk factors for development of cardiovascular disease after TC treatment.

Study design

A multicenter case-cohort study will be performed. We will collect detailed diagnostic- and treatment data on TC and on (risk factors for) CVD for all participants and will invite them to fill in a questionnaire and to donate blood samples for DNA analysis, after written informed consent. Patients who were younger than 40 years at TC diagnosis and younger than 75 years at moment of study contact will be asked to participate in the cardiometabolic risk inventory sub study. For this, participants have to undergo a basic study assessment consisting of physical examination, venapuncture and handing in a morning urine sample. This assessment can be performed at the participating hospital, their general practitioner or at a home visit by a member of our research team. Additional (non-invasive) cardiovascular function measurements are only performed in the UMCG.

Study burden and risks

The nature and extent of the burden associated with participation is estimated as low. Filling in questionnaires takes 15-30 minutes. If patients are willing to participate in DNA analysis, they have to bring a single visit at their general practitioner for a vena puncture. A sub study visit takes approximately 30 minutes. The additional and optional cardiovascular function measurements (only in the UMCG) will prolong the visit with another 30 minutes. Venapuncture is the only invasive procedure, with low risk of adverse effects. Participants will be offered to have measurements performed during a visit to their general practitioner or a home visit to lower the burden of study participation. This study will provide more knowledge on determinants for the development of cardiovascular events among TC survivors. As a result we will know which factors to observe during follow-up and how to detect early cardiovascular

toxicity before severe events occur. With these data rational intervention strategies will be developed.

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

1) All invited patients have to meet the following criteria:
-Alive
-TC diagnosis between 01-01-1976 to 31-12-2007
-TC treatment center: UMCG, NKI/AVL, Erasmus MC, UMCN, LUMC
-Younger than 50 years of age at TC diagnosis;2A) Cases have to fulfill, beside the aforementioned criteria, the following criteria:
-Diagnosed with either myocardial infarction (MI), proven coronary artery disease (CAD) (CTCAE-4 grade 2 or higher) or congestive heart failure (CHF) (CTCAE-4 grade 2 or higher).

-No medical history of CVD before diagnosis of TC;2B) In order to be eligible to participate in the cardiometabolic risk inventory study (and to be invited to a study assessment), a subject must meet, next to the criteria mentioned in *1)*, the following inclusion criteria:
Cases and member of subcohort:
-Younger than 40 years of age at TC diagnosis
-Younger than 75 years of age at moment of inclusion
-Written informed consent

Exclusion criteria

- Mental disorder (no informed consent available)
- Presence of active malignant disease

Study design

Design

Study type: Observational invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	09-07-2014
Enrollment:	900
Type:	Actual

Ethics review

Approved WMO

Date:	18-06-2014
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

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	NL45655.042.13
Other	wordt geregistreerd op clinicaltrials.gov, nummer volgt