fat characteristics before and after weightloss: implications for atrial fibrillation’

No registrations found.

Ethical review	Not applicable
Status	Recruiting
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON20084

Source
NTR

Brief title
Weightloss AF

Health condition

obesity, atrial fibrillation, adipose tissue, electrophysiology, metabolism, epicardial, paracardial, CT-scan

Sponsors and support

Primary sponsor: AMC
Source(s) of monetary or material Support: AMC

Intervention

Outcome measures

Primary outcome

multiple outcomes to identify intra-individual changes of clinical and biochemical markers of AT characteristics upon drastic weightloss:

- AT mass, distribution and ratios (EAT, PAT,VAT)

- Circulating AT derived protein biomarkers, including: inflammatory markers

- Circulating AT derived miRNAs

- Locally AT derived protein biomarkers, extracted from VAT. Markers similar to those in circulation.

- Locally AT derived miRNAs extracted from VAT.

- Anthropometric measurements: height, weight, BMI, waist-circumference, hip-waist ratio.

- Occurrence/absence of AF by an approved 7 days rhythm monitoring system.

- International Physical Activity Questionnaire.

Secondary outcome

-

Study description

Background summary

Obese patients experience more AF occurrences and recurrences compared to patients with a healthy BMI. Clinically, weight loss in obese patients with AF increases AF freedom in a dose-dependent manner, resulting in 50% absence of AF in patients losing >10% bodyweight. These results present a significant relationship between obesity and AF. However, details on the mechanisms underlying this relationship and on reversible pathological factors remain to be discovered.

Therefore, we designed a study in which obesity along with adipose tissue (AT) characteristics are studied upon drastic weight loss. Currently, how drastic weight loss reduces the pro-arrhythmic effect is unknown. AT characteristics before and after weight loss will be compared to AT characteristics from patients with and without AF, obtained from other studies. In this study we aim at investigating the alterations in cardiac AT mass, AT activity and anthropometrics that occur upon drastic weight loss, and at understanding how certain of these fat characteristics predispose to AF.

Study objective

Obesity is significantly associated with Atrial Fibrillation (AF), and, interestingly, if obese patients loose weight, AF dissapears in 50% of the cohort. On the other hand, adipose tissue

(AT) functioning alters up weightchange. Therefore we hypothesize that AT functioning may be responsible for AF occurence.

Study design

Pre-operative: CT scan, blood samples, holter, questioannaire, ECG

Operation: adipose tissue biopsies

Follow-up 6 months: holter, blood samples

Follow-up 12 months: CT scan, blood samples, holter, questioannaire, ECG

Intervention

1. Adipose tissue biopsies during bariatric surgery

2. Blood extraction pre operative and during follow-up

3. CT scan pre-operative and during follow-up

Contacts

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Eligibility criteria

Inclusion criteria

- Patient undergoing bariatric surgery (BMI above 35)

- Age above 40

Exclusion criteria

- Taking 2 or more antihypertensiva

- Taking metformine for diabetes

- Heart diseases, for example myocardinfarct in past

Study design

Design

Study type:	Interventional
Intervention model:	Other
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	01-05-2018
Enrollment:	64
Type:	Anticipated

Ethics review

Not applicable

Application type:	Not applicable

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
NTR-new	NL6989
NTR-old	NTR7178
Other	: Protocol ID: NL62056.018.17

Study results