

Obesity and COVID-19: AdipoSe Tissue Responses to SARS-CoV-2 infection

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We hypothesize that excess adipose tissue, its distribution and secreted mediators play an important role in the type of immune response and subsequently in the progression towards respiratory insufficiency in COVID-19 patients.

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON24411

Bron

Nationaal Trial Register

Verkorte titel

COVID-ASTER

Aandoening

COVID-19

Ondersteuning

Primaire sponsor: UMCG

Overige ondersteuning: ZonMw

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Visceral and subcutaneous adipose tissue susceptibility and permissiveness to SARS-CoV-2 infection.

Toelichting onderzoek

Achtergrond van het onderzoek

Most of the SARS-CoV-2 infected patients admitted to the ICU with respiratory failure had central obesity, extensive visceral fat and a Body Mass Index (BMI) of 25 kg/m² or higher (mean 30 kg/m²). Recent findings from the UK, in the largest cohort study to date, confirm that the likelihood of hospital death due to SARS-CoV-2 is associated with obesity severity. Circulating adipose tissue (AT)-derived mediators such as leptin are known to be associated with BMI and are known to have immunomodulating properties which may prime obese individuals to infection resulting in an exaggerated response. We therefore postulate that excess adipose tissue, its distribution and secreted mediators play an important role in the type of immune response and subsequently in the progression towards respiratory insufficiency in patients with SARS-CoV-2.

Doel van het onderzoek

We hypothesize that excess adipose tissue, its distribution and secreted mediators play an important role in the type of immune response and subsequently in the progression towards respiratory insufficiency in COVID-19 patients.

Onderzoeksopzet

2 adipose tissue samples during surgery of the patient (bariatric surgery) and 1 adipose tissue sample from lean individuals undergoing abdominal surgery

Onderzoeksproduct en/of interventie

We will collect human visceral and subcutaneous adipose tissue samples in order to investigate the adipose tissue responses to ex vivo SARS-CoV-2 infection. Small adipose tissue samples (subcutaneous and visceral) will be collected from patients undergoing either bariatric surgery (obese) or elective abdominal surgery (visceral only) (lean).

Contactpersonen

Publiek

UMCG
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050-3610229

Wetenschappelijk

UMCG
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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Obese: Healthy participants, male and female aged between 18-65years old with a BMI>40.
Lean: Healthy participants, male and female aged between 18-65years old with a BMI<25.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Diabetes mellitus, hypertension, metabolic syndrome, asthma, immune disease such as Crohn colitis, rheumatic disease, cancer, use of soft/hard drugs or smoking. Previous COVID-19 infection.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	N.v.t. / één studie arm
Blinding:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland	
Status:	Werving gestart

(Verwachte) startdatum: 23-12-2020
Aantal proefpersonen: 36
Type: Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nog niet bepaald

Toelichting

N/A

Ethische beoordeling

Positief advies
Datum: 23-12-2020
Soort: Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL9141
Ander register	METC UMCG : 202000929

Resultaten