

# Het ontstaan van post trombotisch syndroom.

Gepubliceerd: 14-11-2011 Laatste bijgewerkt: 15-05-2024

The markers CRP, D-dimer, IL-6, MCP-1, IFN- $\alpha$ , TLR-9, TGF- $\beta$ , MMP-2 or MMP-9 measured at least 2 year after the acute event of DVT are associated with PTS.

|                             |                                                     |
|-----------------------------|-----------------------------------------------------|
| <b>Ethische beoordeling</b> | Positief advies                                     |
| <b>Status</b>               | Werving gestopt                                     |
| <b>Type aandoening</b>      | -                                                   |
| <b>Onderzoekstype</b>       | Observationeel onderzoek, zonder invasieve metingen |

## Samenvatting

### ID

NL-OMON25244

### Bron

Nationaal Trial Register

### Verkorte titel

If PTS

### Aandoening

Post thrombotic syndrome

Deep venous thrombosis

### Ondersteuning

**Primaire sponsor:** Maastricht University Medical Centre

**Overige ondersteuning:** European union

### Onderzoeksproduct en/of interventie

### Uitkomstmaten

#### Primaire uitkomstmaten

The primary outcome will be the difference in levels of plasma concentrations of markers in relation to the outcome PTS between patients with PTS and patients without PTS.

# Toelichting onderzoek

## Achtergrond van het onderzoek

### Background:

Post thrombotic syndrome (PTS) is a chronic complication of deep venous thrombosis, associated with a decreased quality of life and at the same time posing a significant economic burden to society. Up until now the pathogenesis of PTS is not fully understood. Inflammation and fibrosis are thought to be the key players in the pathogenesis of this condition. Innate immunity may determine thrombus resolution and therefore influence the risk of PTS. Markers of inflammation, but also markers for fibrosis or fibrinolysis, may be of use to unravel the pathogenic processes involved in post thrombotic changes to the vessel wall. Finding associations between these markers and PTS can therefore help us to extend the knowledge on the pathogenesis of PTS.

### Objective:

To investigate the role of innate immunity and fibrinolysis in developing PTS by studying the association between markers of immunity, fibrosis and fibrinolysis.

### Study design:

Observational hypothesis generating study that is performed as a case-control study.

### Study population:

The cases are a group of 30 patients who had a DVT 2-10 years ago and consequently developed PTS. The controls are a group of 30 patients who had a DVT 2-10 years ago, but did not develop PTS. The controls are matched on age, gender and BMI.

A second control group consists of healthy controls, 30 healthy people who have never had a DVT during their life. The patients will be recruited from the Maastricht University Medical Centre and the Flevohospital in Almere. As healthy controls partners, brothers, sisters, other relatives or friends of the patients will be asked.

### Intervention:

The participants will be asked to visit the hospital once-only for 3 tubes of blood to be drawn.

Study parameters:

The plasma levels of a panel of markers in participants with PTS compared to participants without PTS.

Risks:

The risks for all subjects participating in this study are the risks of a normal venipuncture: hematoma or continued bleed at the place of puncture.

### **Doel van het onderzoek**

The markers CRP, D-dimer, IL-6, MCP-1, IFN-alfa, TLR-9, TGF-beta, MMP-2 or MMP-9 measured at least 2 year after the acute event of DVT are associated with PTS.

### **Onderzoeksopzet**

N/A

### **Onderzoeksproduct en/of interventie**

N/A

## **Contactpersonen**

### **Publiek**

A.C. Bouman  
Maastricht  
The Netherlands  
+31 (0)43 3874389

### **Wetenschappelijk**

A.C. Bouman  
Maastricht  
The Netherlands

## Deelname eisen

### Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

#### Cases:

1. Minimum age 18 years;
2. Consenting;
3. Having had a DVT 2-10 years ago;
4. PTS according to the Villalta scale: Villalta score  $\geq 5$  on two or more consecutive visits that were at least 3 months apart or venous ulceration.

#### Controls:

1. Minimum age 18 years;
2. Consenting;
3. Having had a DVT 2-10 years ago;
4. No PTS, according to the Villalta scale: No Villalta score  $\geq 5$  on two or more consecutive visits that were at least 3 months apart and no venous ulceration.

#### Healthy controls:

1. Minimum age 18 years;
2. Consenting;
3. Never had a DVT during their life;
4. No venous insufficiency caused by other factors (CEAP<3).

## Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Pre-existent venous insufficiency (skin signs C3-C6 on CEAP score or requiring ECS therapy).

## Onderzoeksopzet

### Opzet

|                  |                                                     |
|------------------|-----------------------------------------------------|
| Type:            | Observationeel onderzoek, zonder invasieve metingen |
| Onderzoeksmodel: | Parallel                                            |
| Toewijzing:      | Niet-gerandomiseerd                                 |
| Blinding:        | Open / niet geblindeerd                             |
| Controle:        | N.v.t. / onbekend                                   |

### Deelname

|                         |                       |
|-------------------------|-----------------------|
| Nederland               |                       |
| Status:                 | Werving gestopt       |
| (Verwachte) startdatum: | 01-12-2011            |
| Aantal proefpersonen:   | 90                    |
| Type:                   | Werkelijke startdatum |

## Ethische beoordeling

|                 |                  |
|-----------------|------------------|
| Positief advies |                  |
| Datum:          | 14-11-2011       |
| Soort:          | Eerste indiening |

## Registraties

### Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 35458  
Bron: ToetsingOnline

Titel:

## Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

## In overige registers

| Register | ID                                  |
|----------|-------------------------------------|
| NTR-new  | NL2993                              |
| NTR-old  | NTR3141                             |
| CCMO     | NL38236.068.11                      |
| ISRCTN   | ISRCTN wordt niet meer aangevraagd. |
| OMON     | NL-OMON35458                        |

## Resultaten

### Samenvatting resultaten

Bouman AC, Cheung YW, Spronk HM, Schalkwijk CG, ten Cate H, ten Wolde M, ten Cate-Hoek AJ. Biomarkers for post thrombotic syndrome: a case-control study. Thromb Res. 2014 Aug;134(2):369-75. doi: 10.1016/j.thromres.2014.06.010. Epub 2014 Jun 13. PubMed PMID: 24975586.