Accumulation of Nadroparin Used in Renal Insufficiency Assessed by anti-Xa levels.

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Prevention and treatment of venous thromboembolism (VTE) with low-molecular-weight heparins (LMWHs) is confirmed to be at least as effective as with unfractionated heparin (UFH). In comparison to UFH, the LMWHs have improved pharmacokinetics, ease...

Ethische beoordeling	Niet van toepassing
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Observationeel onderzoek, zonder invasieve metingen

Samenvatting

ID

NL-OMON26211

Bron
NTR

Verkorte titel
ANURIA

Aandoening

nadroparin, accumulation, renal insufficiency, anti-Xa level, nadroparine, accumulatie, nierinsufficiëntie, anti-Xa spiegel

Ondersteuning

Primaire sponsor: Erasmus MC Rotterdam
Overige ondersteuning: Erasmus MC Rotterdam

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Anti-Xa levels will be measured 4 hours (± 1 hour) after subcutaneous injection of nadroparin on day 1, day 3 and day 5 of treatment. Primary outcome is the degree of accumulation, defined as the percentage of increase of anti-Xa level on day 5 compared to day 1. This primary outcome will be assessed for various levels of renal function.

Toelichting onderzoek

Achtergrond van het onderzoek

Rationale:

Prevention and treatment of venous thromboembolism (VTE) with low-molecular-weight heparins (LMWHs) is confirmed to be at least as effective as with unfractionated heparin (UFH). In comparison to UFH, the LMWHs have improved pharmacokinetics, ease of administration and lack of need of laboratory monitoring, which has greatly increased the use of LMWHs. Because the elimination of LMWHs is mainly determined by renal excretion, the use of LMWHs in patients with renal insufficiency might lead to accumulation of the drug, accompanied by an increase in anti-Xa level and thereby a greater risk for hemorrhagic complications. In literature, data are available on accumulation of LMWHs in patients with renal insufficiency. However, the rate of accumulation of LMWHs and implications for the dosing regimen of LMWHs is only established in one study previously (Mismetti et al. Aging and Venous Thromboembolism Influence the Pharmacodynamics of the Anti-Factor Xa and Anti-thrombin Activities of a Low Molecular Weight Heparin (Nadroparin). Thromb Haemost 1998; 79: 1162-1165). In this study we investigate the accumulation of nadroparin used in renal insufficiency assessed by anti-Xa levels.

Objective:

The aim of this study is to determine the accumulation of nadroparin used in renal insufficient patients with VTE, by measuring anti-Xa levels.

Study design:

Prospective, observational, follow-up study.

Study population:

Hospitalised adult patients with VTE and renal insufficiency (defined as a glomerular filtration

rate (GFR) of less than 50 ml/min) to whom subcutaneous nadroparin is administered on general medical or surgical departments of the Erasmus MC in Rotterdam, the Netherlands.

Main study parameters/endpoints:

Anti-Xa levels will be measured 4 hours (± 1 hour) after subcutaneous injection of nadroparin on day 1, day 3 and day 5 of treatment. Primary outcome is the degree of accumulation, defined as the percentage of increase of anti-Xa level on day 5 compared to day 1. This primary outcome will be assessed for various levels of renal function. Secondary endpoints are the percentage of increase of anti-Xa level on day 3 compared to day 1 and bleeding complications during treatment with nadroparin.

Nature and extent of the burden and risks associated with participation, benefit and group relatedness:

The patient will be asked for 3 blood samples of 4.5 ml to measure the anti-Xa level during treatment with nadroparin. Standard care will be provided, so if the doctor does not decide to measure anti-Xa himself, then the anti-Xa analyses will take place in batches after day 5 of treatment with nadroparin (and thus the values will not be used to adjust therapy during the study period). If still relevant (i.e. when nadroparin is still in use) the anti-Xa levels will be communicated to the doctor after day 5.

Doel van het onderzoek

Prevention and treatment of venous thromboembolism (VTE) with low-molecular-weight heparins (LMWHs) is confirmed to be at least as effective as with unfractionated heparin (UFH). In comparison to UFH, the LMWHs have improved pharmacokinetics, ease of administration and lack of need of laboratory monitoring, which has greatly increased the use of LMWHs. Because the elimination of LMWHs is mainly determined by renal excretion, the use of LMWHs in patients with renal insufficiency might lead to accumulation of the drug, accompanied by an increase in anti-Xa level and thereby a greater risk for hemorrhagic complications. In literature, data are available on accumulation of LMWHs in patients with renal insufficiency. However, the rate of accumulation of LMWHs and implications for the dosing regimen of LMWHs is still unclear. In this study we investigate the accumulation of nadroparin used in renal insufficiency assessed by anti-Xa levels.

Onderzoeksopzet

Day 1, day 3 and day 5 of treatment with nadroparin.

Onderzoeksproduct en/of interventie

No interventions will be done, as this is an observational study.

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Patients are eligible to participate when they comply with the following inclusion criteria:

1. Age at least 18 years;

2. Diagnosed with VTE;

3. First day of therapy with nadroparin;

4. GFR (based on Modification of Diet in Renal Disease (MDRD) calculation) 10-20 ml/min, 20-30 ml/min, 30-40 ml/min, 40-50 ml/min or 50 ml/min or higher (equal distribution of patients to be included over these 5 groups);

5. Treatment dose of nadroparin of at least 7,600 anti-Xa activity IU once daily or 5,700 anti-Xa activity IU twice daily;

6. Subcutaneous nadroparin administration for at least 3 days;

7. Written informed consent.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Patients are not eligible to participate with respect to the following exclusion criteria:

1. Patients on an intensive care unit (ICU);

2. Prophylactic dosages of nadroparin for VTE;

3. GFR less than 10 ml/ml or dialysis;

4. Severe liver failure;

5. Pregnant patients or patients giving breast feeding;

6. Nadroparin in use for more than 1 day.

Onderzoeksopzet

Opzet

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

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-05-2011
Aantal proefpersonen:	30
Type:	Verwachte startdatum

Ethische beoordeling

Niet van toepassing
Soort: Niet van toepassing

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	NL2712
NTR-old	NTR2850
Ander register	:
ISRCTN	ISRCTN wordt niet meer aangevraagd.

Resultaten

Samenvatting resultaten
N/A