NT-proBNP Testing in Patients Presenting to the Emergency Department With Acute Dyspnea: Evaluation of Effects on Treatment, Hospitalisation Rate and Costs

No registrations found.

Ethical review	Positive opinion
Status	Recruitment stopped
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON24573

Source
NTR

Health condition

dyspnea (dyspnoe); amino-terminal pro B-type natriuretic peptide (amino-terminaal pro B-type natriuretisch peptide); costs (kosten); cost-effectiveness (kosteneffectiviteit)

Sponsors and support

Primary sponsor: Erasmus MC
Department of Internal Medicine
's Gravendijkwal 230
3015 CE Rotterdam
Source(s) of monetary or material Support: Mrace Comittee, Erasmus MC
fund = initiator = sponsor

Intervention

Outcome measures

Primary outcome

1. Time to discharge;
2. Cost of treatment

Secondary outcome

1. Duration of stay at the ED;
2. Proportion of patients admitted to the hospital;
3. Proportion of patients admitted to an intensive or coronary care unit;
4. Specialist consultations;
5. Medical treatment;
6. Diagnostic investigations

Study description

Background summary

Elevated amino-terminal pro-B-type natriuretic peptide (NT-proBNP) plasma levels are indicative for heart failure. Assessment of this biomarker in patients with acute dyspnoea presenting to the emergency department may aid diagnostic decision-making; resulting in improved patient care and reduced costs.
We will investigate the cost-effectiveness of introduction of NT-proBNP measurements in patients presenting with acute dyspnoea to the emergency department of the Erasmus MC, Rotterdam, the Netherlands. Subjects will be randomised for either rapid measurement of plasma NT-proBNP or no diagnostic measurement of NT-proBNP. For ruling out heart failure, cut-off values of 11 pmol/l in males and 17 pmol/l in female patients will be used, and for ruling in heart failure a cut-off value of 120 pmol/l. Time to discharge from the hospital and costs related to hospital admission are primary end-points.

Study objective

Diagnostic uncertainty in patients with complaints of shortness of breath presenting to the Emergency Department of a hospital may delay treatment and proper care. In patients with shortness of breath due to heart failure increased plasma levels of NT-pro-B-type natriuretic peptide (NT-proBNP) can be demonstrated. The use of NT-proBNP as a biomarker for heart failure in patients presenting to the emergency department with dyspnea might improve care and reduce length of hospital stay. In our study we will investigate the effect of introduction of NT-proBNP as biomarker for heart failure on treatment, time to discharge and costs.

Intervention

Study-group: Measurement of NT-proBNP plasma level at presentation in the Emergency Department.
Control-group: No measurement of NT-proBNP plasma level at presentation in the Emergency Department. Blood was collected for determination of NT-proBNP levels at the end of the study.

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Eligibility criteria

Inclusion criteria

1. Age 18 years or older;
2. Acute dyspnea as the most prominent complaint

Exclusion criteria

1. Acute dyspnea due to a trauma;
2. Acute dyspnea due to cardiogenic shock;
3. Renal failure requiring dialysis.

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Masking:	Single blinded (masking used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	12-01-2004
Enrollment:	477
Type:	Actual

Ethics review

Positive opinion

Date:	15-04-2007
Application type:	First submission

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	NL931
NTR-old	NTR956
Other	:
ISRCTN	ISRCTN28653133

Study results