31P Magnetic Resonance Spectroscopic Imaging of brain tumours

Published: 15-12-2008
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To characterise the phosphoester profile in brain tumours and to investigate the differences in composition of (glycerol)phosphocholine and (glycerol)phosphoethanolamine tissue levels.

Ethical review	Approved WMO
Status	Pending
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON32708

Source
ToetsingOnline

Brief title
31P MRSI of brain tumours

Condition

- Other condition

Synonym
brain tumour, glial tumour

Health condition

hersen tumoren

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Sint Radboud
Source(s) of monetary or material Support: Europese unie

Intervention

Keyword: choline metabolism, glial tumors, MRSI

Outcome measures

Primary outcome

In this study we try to characterise the phosphoester content in brain

tumours. The main study parameters are the peak areas of the (glycerol)choline

and (glycerol)ethanolamine in the 31P MR spectrum.

Secondary outcome

1H MRS spectra.

Study description

Background summary

From animal and cell culture studies it appears that the phosphor mono and di-ester content in tumours is different from that in the normal brain tissue and that these molecules might be markers for tumour, malignancy and tumour respons to therapy. We have developed a new technique to study in particular the (glycerol)phophocholine and (glycerol)phosphorethanolamine compounds in vivo in the human brain in a non-invasive way. More insight into the choline metabolism of tumours might be important for tumour diagnosis and treatment follow up.

Study objective

To characterise the phosphoester profile in brain tumours and to investigate the differences in composition of (glycerol)phosphocholine and (glycerol)phosphoethanolamine tissue levels.

Study design

This is an observational study. Patients will be examined only once. The data will be analyzed.

Study burden and risks

Patients undergo an MRS examination. They have to lie down in the MR scanner for approximately 60 minutes, with their head in a coil. This head coil is a little different from the standard manufacturer coils because the patient cannot look through it, he/she can only look through a small * window* but it fullfills the same safety requirements.

Contacts

Public
Universitair Medisch Centrum Sint Radboud

Geert Groote plein 10
6500 HB Nijmegen
Nederland
Scientific
Universitair Medisch Centrum Sint Radboud

Geert Groote plein 10
6500 HB Nijmegen
Nederland

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

patients with a glial tumour and without MRI contra-indication

Exclusion criteria

patients with MRI contra-indication. patients that are claustrofobic. Patients with pacemakers or neurostimulators. Patients with large metal implants

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	30-09-2008
Enrollment:	20
Type:	Anticipated

Ethics review

Approved WMO

Date:	15-12-2008
Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

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
CCMO	NL24743.091.08