Irreversible electroporation (NanoKnife) for advanced perihilar cholangiocarcinoma

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

Samenvatting

ID

NL-OMON25184

Bron
NTR

Verkorte titel
ALPACA

Aandoening

cholangiocarcinoma

Ondersteuning

Primaire sponsor: Academic Medical Center (AMC)
Overige ondersteuning: Angiodynamics provides financial support for the NanoKnife electrodes

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

The total number of clinically relevant complications within 90 days post-IRE, defined as complications requiring re-intervention, prolonged hospital stay, intensive care admission, re-admission or leading to mortality; summarized by a Common Terminology Criteria for Adverse Events (CTCAE, version 4.0) score of 3 or higher.

Toelichting onderzoek

Achtergrond van het onderzoek

RATIONALE:

The majority of patients with perihilar cholangiocarcinoma (PHC) have locally advanced disease or lymph node metastases upon presentation or exploratory laparotomy, which makes resection not amenable. As the prognosis of patients with locally advanced PHC (LAPHC) or PHC with lymph node metastases in the palliative setting is significantly better compared to patients with organ metastases, ablative therapies may be beneficial. Unfortunately, current ablative techniques such as photodynamic therapy for LAPHC are limited by serious side effects. Furthermore, thermal ablative methods in tumors located close to vascular structures are affected by a heat/cold-sink effect, which may be particularly challenging in PHC due to the typical location in the liver hilum. These limitations may be overcome by irreversible electroporation (IRE), which is a relatively new, non-thermal ablative method that has proven to be safe and efficacious in other soft tissue tumors, such as pancreatic adenocarcinoma.

OBJECTIVE:

This study is primarily set up to investigate the safety and feasibility of IRE for the treatment of unresectable, locally advanced or nodal metastasized PHC. The efficacy of IRE will also be studied.

DESIGN:

Multicenter phase I/II safety study.

STUDY POPULATION:

Twenty patients with advanced PHC due to locally advanced disease and/or lymph node metastases (N2), either based on preoperative imaging, upon staging laparoscopy or exploratory laparotomy.

INTERVENTION:

Computed tomography-guided percutaneous IRE (N=10) or ultrasound-guided IRE during exploratory laparotomy (N=10).

STUDY ENDPOINTS:

The primary outcome is safety, defined as the total number of clinically relevant complications (Common Terminology Criteria for Adverse Events [CTCAE], score of 3 or higher) within 90 days post-IRE. Secondary outcomes are the success rate of completing IRE, intra-procedural complications related to IRE, duration of hospital stay, quality of life, impact of IRE on post-procedural CT imaging and blood biomarker response, time between IRE and start of palliative chemotherapy, progression-free and overall survival.

FOLLOW UP:

90 days after intervention for the primary endpoint. For survival endpoints there is a 2-year follow up.

Doel van het onderzoek

Irreversible electroporation (IRE, NanoKnife) is feasible and safe in patients with advanced perihilar cholangiocarcinoma. IRE will add approximately 25% clinically relevant complications, defined as a CTCAE score 3 or higher, to the current 40% of complications associated with biliary drainage in the palliative management.

Onderzoeksopzet

- Percutaneous metal biliary stent placement 4 weeks after IRE;

- Palliative systemic chemotherapy preferably started within 6 weeks after IRE;

- CT scan + blood sample 6 weeks and 6, 12 and 24 months after IRE;

- Quality of life assessment: baseline, 6 weeks, 3 months and 6 months after IRE;

- Regular treatment response evaluation after every 2 cycles of chemotherapy.

Onderzoeksproduct en/of interventie

Irreversible electroporation (IRE) is a non-thermal, image-guided ablation technique based on creating short-pulsed high-voltage current fields. The electrical pulses permeabilize the lipid

bilayer of the cell membrane which causes intracellular homeostasis to disrupt and thereby induces apoptosis.

- Pre-IRE: biliary drainage if total bilirubin > 50 µmol/L;

- Open group: ultrasound-guided open IRE during exploratory laparotomy;

- Percutaneous group: CT-guided percutaneous IRE. Prior to percutaneous IRE, a pigtail catheter will be placed in the common hepatic artery in the angiography suite entering from the right common femoral artery, for administration of small amounts of intra-arterial contrast during IRE. This allows the repeated and real-time visualization of the vessels adjacent to or encasing the tumor and the tumor enhancement pattern, thereby improving the safety and accuracy of electrode placement, whilst reducing the total dose of contrast administered.

- Post-IRE: plastic drains will be exchanged for definitive metal stents through a percutaneous approach 4 weeks after IRE. All patients are offered systemic chemotherapy (standard of care).

Participating centers are AMC and VUmc.

Contactpersonen

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Age 18 years or older;

- Capable of providing written and oral informed consent;

- WHO ≤2;

- Meets criteria for advanced PHC:

1) Vascular or lymph node (N2) involvement on imaging or during staging laparoscopy.

Diagnosis of PHC or lymph node metastases must be confirmed with endoscopic brush, percutaneous- or laparoscopic biopsy, whichever is suitable.

2) Vascular or lymph node (N2) involvement during exploratory laparotomy.

Must be confirmed with intra-operative frozen section.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- Resectable PHC upon exploratory laparotomy;

- Locally advanced PHC eligible for liver transplantation;

- PHC with > 5 cm extension along the common hepatic duct or common bile duct;

- Metastases to peritoneum, liver or other organs confirmed by percutaneous biopsy, staging laparoscopy or intraoperative frozen section;

- History of cardiac arrhythmia’s (sinus tachycardia (BPM>100), sick sinus syndrome, sinoatrial exit block, AV block, sinus node reentry, presence of a pacemaker or defibrillator);

- Recent history of myocardial infarction;

- Uncontrolled hypertension (blood pressure must be ≤160/95 mmHg at the time of screening on a stable antihypertensive regimen);

- Uncontrolled infections (> grade 2 NCI-CTC, version 3.0);

- History of epilepsy;

- Partial portal vein thrombosis (complete thrombosis is not an exclusion criterion);

- Both narrowing (sclerosis) of the portal vein and a reduced diameter of either the common hepatic artery, celiac trunk or superior mesenteric artery of >50%;

- Any condition that is unstable or that could jeopardize the safety of the subject and their compliance in the study.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Anders
Toewijzing:	Niet-gerandomiseerd
Blindering:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-09-2016
Aantal proefpersonen:	20
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	04-07-2016
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 50469
Bron: ToetsingOnline
Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL5785
NTR-old	NTR5948
CCMO	NL56231.018.15
OMON	NL-OMON50469

Resultaten