Preserving ovARian function through cryoprEservation and informing girLs with cancer about infertility due to gonadotoxic treatment

Gepubliceerd: 29-11-2019 Laatst bijgewerkt: 18-08-2022

Evaluation of fertility care in the Princess Maxima Center: It is feasible to identify, assess on risk and inform all girls newly diagnosed with cancer, offer additional counseling for patients at increased risk for infertility and safely offer…

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

Samenvatting

ID

NL-OMON24589

Bron
Nationaal Trial Register

Verkorte titel
PAREL

Aandoening

Pediatric oncology, infertility

Ondersteuning

Primaire sponsor: Princess Maxima Center
Overige ondersteuning: Private funding via Stichting Steun het Prinses Maxima Centrum

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Cohort A
Primary endpoint: Measuring the number of patients receiving fertility information with the intention to inform all girls newly diagnosed with cancer and their families, by documenting:
- Percentage of girls diagnosed with cancer who received fertility information (verbal and written information)

Cohort B
Primary endpoint: Measuring the number of patients receiving fertility counseling by documenting:
- Percentage of girls to whom fertility counselling is offered prior to start gonadotoxic treatment and who received additional fertility counseling by fertility expert

Cohort C
Primary endpoint: Evaluation of OTC in a national cohort
- Rate of complications such as bleeding requiring blood transfusion or other treatment, bowel perforations requiring additional surgery or inter-operative repair, infection requiring antibiotics within four weeks of the surgery and relatable to the surgery using CTCAE criteria.
- Percentage longer hospitalisation (in days) due to complications of the OTC
- Percentage of laparoscopic procedures vs. laparotomic procedures
- Delay in initiation of oncological treatment (days)(median range)
- Determinants of delay in initiation of oncological treatment (>48h)
- Success rate of combination of OTC with planned anesthesia/surgery (percentage of procedures)

Cohort 0
The primary endpoint of cohort 0 is to evaluate the number of patients who received fertility information in the first year of the Princess Máxima Center through a retrospective chart review by documenting:
- Percentage of girls diagnosed with cancer who received fertility information (verbal and written information)

Toelichting onderzoek

Achtergrond van het onderzoek

Childhood cancer treatment has resulted in excellent survival rates over the past decades. Hence, awareness for serious early and long term toxicity is increasing. Impaired fertility potential is one of the most relevant long term morbidities as rated by survivors and their families. Currently, at presentation of a new child with cancer, the focus is on an optimal and rapid diagnostic process, in order to start treatment as soon as possible. In that process,

informing the girl with cancer and her family about toxicity of the treatment, and in particular about the risk of potential gonadal damage, does not always have the highest priority in pediatric oncology care.
This needs to be urgently changed, as patients and their families benefit from knowing when the risk is low, as that gives them, at least some, relief. On the other hand, subsets of patients with high risk of gonadal damage may benefit from referral to fertility experts, who may advise them to preserve gonadal material, for future purpose, preferably before childhood cancer treatment is started. Of course this requires careful consideration in terms of potential delays in anti-cancer treatment, balanced against the time required for fertility counselling and preservation. However, in principal, a standard infrastructure to inform all girls with cancer and their families is needed and thus a fertility care plan has been developed in the Princess Máxima Center.

Preservation options such as oophoropexy and oocyte vitrification are widely accepted as standard of care, but for many patients not an appropriate option for preservation. Recently, preservation methods, such as ovarian tissue cryopreservation (OTC), have become available for children potentially at risk for gonadal damage. Currently, for prepubertal girls with cancer, OTC is the only possible way to potentially guarantee future biological offspring, by utilizing the preserved ovarian tissue for auto-transplantation in the future.(1, 2) In addition, although 130 births after auto-transplantation of OTC material, harvested in postpubertal women, have been reported, only two births have been described after a successful auto-transplantation procedure, after OTC harvested in a prepubertal or peripubertal girl specifically. A gap of knowledge exists in the field of fertility care and OTC as a fertilty preservation method and this study aims to fill these gaps.

Study population: Patients will be included in 3 prospective cohorts (cohort A, B and C) and 1 retrospective cohort (cohort 0). Patients who underwent OTC and who opt for auto-transplantation will be included in a future prospective study, regardless of the moment and age of OTC or inclusion in cohorts A, B, C or 0 (including adults).

All girls aged from 0 to 18 years to be treated in the Princess Máxima Center for a malignancy (including relapse) are invited to participate in cohort A. If they have an intermediate to high risk of infertility they can also be included in cohort B, and the offered individualized counseling by a gynecologist as standard of care will be evaluated. Only a select group at high risk for infertility will be offered OTC as standard of care, which will be evaluated in cohort C.
For the retrospective chart review in cohort 0 all patients with a new pediatric diagnosis or new relapse from the first of May 2018 will be eligible. All patients who underwent OTC prior to the start of the study and since the opening of the Princess Maxima Center will be entered into cohort 0.

Objectives:
Cohort A:
The primary objective of cohort A is to show that by implementing a standard infrastructure all newly diagnosed girls with cancer (or relapse) and their families can be informed on fertility in a structured manner by the navigator (nurse practitioner), prior to the start of gonadotoxic cancer treatment about their particular risk of fertility impairment due to their

gonadotoxic treatment.
The secondary objectives of cohort A are:
- to qualitatively describe the impact of receiving information regarding fertility at the time of cancer diagnosis (1 year after diagnosis or at the end of treatment),
- to determine the influence of diagnosis and treatment on the remaining gonadal reserve, reflected by anti-müllerian hormone (AMH), follicle-stimulating hormone (FSH), estradiol and luteinizing hormone (LH) levels and menstrual cycles (secondary amenorrhea).

Cohort B:
The primary objective of cohort B is to offer counseling about fertility preservation by the gynecologist to all families with a child with an intermediate to high risk of infertility according to the Edinburgh criteria and cyclophosphamide equivalent dose (CED) (Table 2.) due to gonadotoxic treatment.(3, 4)
The secondary objectives of cohort B are:
- to explore the reasons for the decision to preserve or not.
- to qualitatively describe the impact of receiving information regarding fertility at the time of cancer diagnosis combined with the counseling (1 year after diagnosis or at the end of treatment)

Cohort C:
The primary objective of cohort C is to evaluate the OTC procedure in a large pediatric oncology population with respect to surgical complications of ovarian tissue (OT) harvest for cryopreservation of ovarian tissue within four weeks of the surgery and relatable to the surgery, including the delay in initiation of cancer treatment.
The secondary objectives of cohort C are:
- to describe the number of OTC’s performed and the characteristics of patients undergoing OTC
- to determine the influence of OT harvest on the remaining gonadal reserve, reflected by anti-müllerian hormone (AMH), follicle-stimulating hormone (FSH), estradiol and luteinizing hormone (LH) levels and menstrual cycles (secondary amenorrhea).

Cohort 0:
The primary objective of the retrospective cohort 0 is to evaluate the fertility care in the first year since the opening of the Princess Máxima Center by documenting number of informed patients
The secondary objectives of cohort 0 is:
- to describe the characteristics of informed and non-informed patients.

Study design: Prospective longitudinal observational registry study design (cohort A,B,C). Retrospective chart review in the first year of fertility care after opening of the Maxima (cohort 0).

Doel van het onderzoek

Evaluation of fertility care in the Princess Maxima Center: It is feasible to identify, assess on risk and inform all girls newly diagnosed with cancer, offer additional counseling for patients at increased risk for infertility and safely offer fertility preservation in a national pediatric

oncology center.

Onderzoeksopzet

Maximum of 5

Onderzoeksproduct en/of interventie

None

Contactpersonen

Publiek

Prinses Máxima Centrum voor kinderoncologie
Madeleine van der Perk

0625710394

Wetenschappelijk

Prinses Máxima Centrum voor kinderoncologie
Madeleine van der Perk

0625710394

Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Written informed consent
- Female gender
- Age 0-18 years
- Confirmed new diagnosis of pediatric cancer or relapse since start of the study

Additional inclusion criteria for cohort A
- none

Additional inclusion criteria for cohort B
- Intermediate to high risk of infertility defined as >50% risk of infertility or Premature

Ovarian Insufficiency (POI).
- Low risk of infertility (<50%) with a strong wish for additional fertility counseling

Additional inclusion criteria for cohort C (OTC)
- Indication for gonadotoxic treatment
- Counselled regarding fertility preservation by a fertility specialist
- Intermediate-high risk (>50%) of POI and eligible for OTC according to the amended Edinburgh criteria.
- A realistic chance of survival for 5 years and undergoing curative treatment,
- Opted for OTC
- Written informed consent for OTC

Additional inclusion criteria for cohort 0
- Patients newly diagnosed with pediatric cancer or relapse between May 2018 and start of the study or have undergone OTC between May 2018 and the start of the study.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Additionally a subject who meets any of the following criteria will be excluded from participation in the subgroup C opting for OTC
- Oncological contra-indications to delay treatment to allow OCT
- POI
- Contra-indication for laparoscopy or laparotomy
- Parents and/or patients > 12 years unable to understand the treatment- and/or study information even in the presence of an interpreter

Onderzoeksopzet

Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders
Toewijzing:	N.v.t. / één studie arm
Blindering:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	30-12-2019
Aantal proefpersonen:	515
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nog niet bepaald

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	NL8192
Ander register	METC Utrecht : Will follow shortly

Resultaten