Sheffield Teaching Hospitals NHS
NHS Foundation Trust

Project title: The psychological impact of GTN on women who have completed chemotherapy treatment

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Project title:
The psychological impact of GTN on women who have completed chemotherapy treatment

Research question:
What is the psychological impact on women with GTN who have completed chemotherapy treatment?

Objectives:

- Gaining insight into the emotional impact of GTN post treatment
- Ascertaining if health professionals are providing adequate psychological support
- Identifying sources of support that patients accessed post completion of treatment
- Identifying potential areas of improvement in the follow up support for future patients

Abstract:
Gestational Trophoblastic Neoplasia is highly curative but can have psychological consequences for women due to the nature of the diagnosis. Little is known about the psychological impact of diagnosis and treatment experienced by women following the completion of treatment. As the specialist centre for GTN in the North of the UK, it is important to understand the experiences and care needs of our patients. The aim of the study is to explore women's experiences following treatment, how they managed any negative impacts and investigate if there is gap in the follow up support provided to patients after treatment.

The study aims to have 20 participants who received chemotherapy. Semi-structured telephone interviews will be conducted; each interview will be digitally recorded and transcribed verbatim. Thematic analysis will be used to generate in depth descriptions of the patients experiences. The findings will enable health care professionals working closely with this unique group of patients to gain some understanding of the patient perspective; recommendations will be made to improve the support and provision of care these patients receive after their treatment has completed.

Aim:
The aim of the study is to explore the experiences of women with GTN following completion of chemotherapy

Background:
Gestational Trophoblastic Neoplasia (GTN) encompasses pregnancy related tumours including invasive mole, choriocarinoma and placental site trophoblastic tumours. Patients are registered and treated at one of the two only treatment centres in the UK, Charing Cross Hospital, in London and Sheffield Trophoblastic Disease Centre, in Sheffield. The biomarker used to measure the disease is human chorionic gonadotropin (hCG). Patients undergo chemotherapy treatment over several months or, until their biomarker is normal and a further 6 weeks from normalisation. The International Federation of Gynaecology and Obstetrics (FIGO 2000) scoring system is used to guide first line treatment decisions, a score of 0-6 categorises the patient as low risk and aims to predict a lower chance of developing resistance to first line treatment, and patients are treated with single-agent chemotherapy. A score of 7 or above is categorised as high risk with almost no chance of complete hCG response to single agent chemotherapy, and therefore patients are recommended combination chemotherapy from the outset (Winter et al 2016).

Overall GTN has a high cure rate of more than 95% even in the presence of metastatic disease (Sarwar 2004). However, the psychological burden of the disease can be challenging, as most

patients will have had a much-wanted pregnancy which turns into a cancer diagnosis, or they may have given birth and are then faced with intensive treatment over several months, added with travelling to the treatment centre miles from their home and the disruption to the family unit (Singh et al 2017).

Support is provided during treatment with the clinical nurse specialists playing an integral role in providing psychological support. Gestational Trophoblastic Disease (GTD) specialist nurses provide holistic packages of care to help women face the numerous psychosocial challenges of their diagnosis (Ireson and Singh 2022). There is much evidence on supporting patients and families with the psychosocial impact of cancer during treatment and this has been branched out to survivorship as many more patients are living longer after their cancer diagnosis (Recklitis and Syrjala 2017). According to Lotfi-Jam et al (2019) the period immediately after treatment can be distressing but most patients will not require intense long-term care, but it is critical to assess the unmet needs to prepare survivors of what to expect.

A very early study in GTD provides insight into the complex survivorship relationship between QOL and GTN (Wenzel et al 2002). They found that over 50% of respondents would have liked to engage in a counselling program to discuss their psychosocial issues raised by the diagnosis. Later studies showed that women scored lowest for their psychological health (Ferreira et al 2009) especially those receiving chemotherapy (Peterson et al 2005). In the GTD service we have established online support groups, electronic Patient Reported Outcome Measures (ePROM) and nurse led clinics for patients who have completed treatment. Some evaluation of these services has been carried out but understanding experiences of the psychological impact of GTN from the perspective of patients will help to identify if there are any unmet needs that could be met by the GTD multidisciplinary team.

Little research attention has been given to the psychological needs of patients following the completion of their treatment. This study aims to explore this in more depth.

Plan of investigation:

Methodology

A cross-sectional retrospective study of a sample of 20 women who completed single agent or multi agent chemotherapy: between 6 weeks and 24 months post treatment involving a semi structured telephone interview. This is felt to be appropriate as this topic has received very little research attention for this rare disease and the study aims to capture the patients' own descriptions of their symptoms and experiences. The timeline will capture different perspectives from the varying treatments that patients received, this may provide valuablet insight into patient experiences during different time points.

Telephone interviews will be conducted to gain insight into the patient's experiences. The rationale for using the telephone method is based on the geographical location of our patients. It is not feasible for the investigators to travel to individual homes to conduct the interviews or ask patients to travel. This method has the advantage in that it is relatively inexpensive. The telephone interview offers a robust method of eliciting information from patients about the quality of their care which could help to design improved services. The telephone interviews were designed following discussions with the clinical team and with the aim of answering the research question.

Setting

All interviews will be recorded via telephone and take place at Weston Park Hospital. The principal investigator will be responsible for negotiating dates and times of the interview and contacting the

participants the day before to ensure they are still available for the scheduled interview. The principal investigator will ensure a designated quiet room is available for the interviews without any interruptions. Each interview will be digitally recorded and transcribed verbatim using an external company- Lawson Hardwick Limited 1st class secretarial services. An hour will be allocated for each interview.

Sample

A patient sample of 20 is proposed for the study. These are all the patients who meet the inclusion criteria below and are thus eligible for the study. These patients will be contacted via telephone by the principal investigator to inform them of the study and invite participation. A proposal of 20 is sufficient to generate data to address the central questions and furthermore, this sample size is adequate because the intention is to gain insight into the experiences of patients' perceptions about their psychological experiences.

Criteria for inclusion:

- Treated with chemotherapy for a GTN diagnosis
- Completed treatment between 6 weeks and 24 months
- Are able to provide informed consent
- Have no cognitive impairment as judged by the treating clinician

Criteria for exclusion

- Treatment received less than 6 weeks ago
- Treatment received more than 24 months ago
- Non-English speaking

Recruitment

Each of the participants will receive a written information leaflet via email with the details of the nature of study and a written consent form for them to sign and return. The principal investigator will be responsible for contacting the patients once the consent forms have been returned to discuss the study and answer any questions. The interview schedule will be sent prior to the interviews. This will enable them to think about what they would like to say, and importantly, offer them the opportunity to tell their experience in depth.

Intervention

Patients are selected as potential participants from the GTN database by the principal investigator

Patients are contacted by the principal investigation via telephone to invite them to the study

Patients are emailed the information leaflet along with the written consent form to return back

If the patients consent to participate in the study the chief investigator will contact participants to discuss the study and email the interview schedule

An interview will be arranged at a time and date convenient to both the patient and the investigator

Outcome measures

Outcome measures are not appropriate in this qualitative study. However outputs from this study include increasing knowledge and insight into:

- patients' experiences of their psychological experiences post chemotherapy
- patients' perspective of the support received after their treatment
- potential areas of improvements in care

Analysis

Thematic analysis will be used to generate in depth descriptions of the patients experiences. This process of analysis involves looking for themes which are present in the interviews and making comparisons and contrasts between the different respondents. The thematic analysis will be carried out by three investigators. Independent analysis will be carried out separately then meetings will be scheduled to analyse and discuss any agreements and discrepancies to ensure reliability of the interpretations of the data.

Data Collection

Data will be collected using telephone semi structured interviews; the interview schedule was developed using the expertise from the research team and on the basis of the aims of the study.

Project management

Overall day to day running of the project will rest jointly with the named CI (KS) and clinical nurse specialists within the team (SR, JR, SG). The CI (KS) will also coordinate all regulatory/ethics approvals and take overall responsibility for all aspects of the study including the management, recruitment targets, financial management and for ensuring project milestones are achieved. A Project Advisory Group will be established comprising the listed investigators. The Project Advisory Group will meet 3 monthly to discuss the progress of the study. The interviews will be undertaken by SG, SR, JR and CW. Interview transcripts will be undertaken by an external company. Analysis will be undertaken by KS, CW and JI. KS, CW and JI will be involved in writing the findings and MCW will oversee the project.

Project timescale

Year	Month	Activity
2023	June	Literature research
2023	July	Complete protocol and IRAS application to obtain REC and R&D authorisation
2024	Jan	Select potential participants suitable for the study
2024	Feb	Send consent forms and patient information to patients who have agreed to participant
2024	March	Commence interviews
2024	May	Transcribe all the interviews
2024	June	Analysis of data
2024	Aug	Write up study
2024	Oct	Present the study at ISSTD world congress

Expertise of the researcher and associated team

Associate team – Sarah Gillett (SG), Sarah Rollins (SR), Joanna Ronksley (JR). Clare Warnock (CW), Jane Ireson (JI), Matt Winter (MW).

The chief investigator has been the lead nurse for the Sheffield centre since May 2013 and appointed nurse consultant in January 2023. She has wide experience in oncology nursing which has enabled her to provide patients with the care and support they need. KS has previous experience in qualitative research with one study which specifically explored the patient's experiences of their illness using interview methodology as well as a recent study exploring patients menopausal symptoms post chemotherapy for GTN.
JR, SR and SG all have expertise in oncology nursing. SG has been the GTN specialist nurse for the last 12 years. JI has also been a GTN clinical nurse specialist for 13 years and is currently a research fellow undertaking her PhD developing a health related questionnaire specifically for GTN patients. She has also has experience in undertaking interview methodology. MW is a Consultant Medical Oncologist, Honorary Reader in Medical Oncology and Yorkshire Cancer Research NHS Academy fellow and specialises in the treatment of GTN and is also an active clinical researcher with many peer reviewed publications in both GTN and Breast cancer. CW has a wealth of research undertaking numerous qualitative studies using telephone interviews in oncology nursing.

Ethical and safety issues
The risks associated with this project are minimal. There are no medical or invasive procedures involved. Therefore, this study does not envisage any harm to be caused to the participant and it is unlikely that the study will encounter any adverse events. It is felt that contacting the patients to invite them to participate is a justified method because the centre has built an excellent rapport with their patients. These patients received treatment at Weston Park Hospital over a number of months; over this period, they have built good trusting relationships with their clinical nurse specialists. Furthermore, these patients continue to be followed up in clinic and via telephone after the treatment has completed. It is possible that the nature of data collection, focusing on personal experiences, may result in some distress to some participants. Both the clinical and research team have extensive experience of caring for patients with cancer. The researchers have relevant experience in working in cancer care and are skilled at talking to patients and will be able to recognise patient distress. If necessary, and with the patients consent, other supportive networks will be made available. The research team will have direct access to the clinical nurse specialist team and be able to refer patients back to their allocated CNS (with the participant's consent).

Patients who agree to participate in the study will be emailed an information sheet explaining the nature of the study and what it entails. Participants will need to sign and return the consent form. We are aware there may be recall bias as some patients who received treatment almost 24 months ago may not have any symptoms, or not recall in detail compared to those patients who have completed their treatment less than 6 months ago. The use of telephone and email is deemed appropriate as patients often use this method to contact their nursing team and all emails are provided on registration.

There is a potential that during the interview a participant mentions an aspect of care that raises concern regarding care quality, client safety or negligence. If this occurs the study team member will act accordingly, and act follow refer back to the appropriate service provider or care professional.

Subject Withdrawal:
Participants will be able to withdraw from the study at any point; their data will be disposed of using the trust guidelines. If there is sufficient data generated then the study will continue.

Confidentiality
All study data including the interview recordings and transcriptions will be identifiable only by an ID number which will be assigned on signing the consent form. Any identifying details will be removed and the transcriptions will be anonymous. The data will be stored securely and confidentially. The interviews will be conducted in a private quiet room. All study data will be stored securely and confidentially in accordance with the Data Protection Act 2018. The data will be kept in locked cupboards and on password protected computers at each of the Trust's centres. The data will be securely kept for future research on the Trust's computer with a secured password.

Involvement of service users:
Two patients who will not be participating in the study have been involved in reviewing the interview questions.

Strategy for taking the work forward if the research project is productive:
The results will be disseminated within the MDT and presented at the next European meeting and International Society for the Study of Trophoblastic Diseases conference in 2024. The findings will enable health care professionals working closely with this unique group of patients to gain some understanding of the patient perspective and importantly improve the patient experience, furthermore, gaining a close insight and improving their own knowledge.

Intellectual property arrangements:
The intellectual property arrangements will be standard for research conducted in the NHS and funded within charitable sources.

Costing the project:
1st class secretarial services £1500.00 plus VAT (based on 20 interviews approximately 1 hour each).
Funding source:
Research charity, 'Jean's Research Trust'. This study will be carried out by the investigators in their own employment within their current roles.

End of study definition
The study will end when all the data is analysed.

REFERENCES

FIGO Oncology Committee, FIGO (2002) Staging for gestational trophoblastic neoplasia 2000. Int J Gynaecol Obstet 77(3):285-287.

Ireson, J & Singh, K. (2022) Holistic Models of Care in Gestational Trophoblastic Disease: An International Perspective. In Gestational Trophoblastic Disease 5th Edition, Hancock BW, Seckl MJ and Berkowitz RS. Available at https://isstd.org/gtd-book.html

Lofti-Jam K, Gough K, Schofield P, Aranda M, Jefford, M. A longitudinal study of four unique trajectories of psychological distress in cancer survivors after completing potentially curative treatment. Acta Oncologica, 2019: 58(5), PP.782-789.

Petersen, R.W., Ung, K., Holland, C. and Quinlivan, J.A. The impact of molar pregnancy on psychological symptomatology, sexual function, and quality of life. Gynecologic oncology, 2005: *97*(2), pp.535-542.

Recklitis CJ, KL Syrjala KL. Provision of integrated psychosocial services for cancer survivors post-treatment. The Lancet Oncology, 2017: 18(1),pp.e39-50.

Sarwar N, Newlands E, Seckl M (2004). GTN management of relapsing patients. Current oncology reports. 6: p476-482.

Singh K, Warnock C, Ireson J, et al. (2017). The experience of women with gestational trophoblastic neoplasia treated with high dose chemotherapy and stem cell rescue; a qualitative study. Oncol Nurs Forum. 44: 375–83.

Wenzel, L*.,* Berkowitz, R. S*.,* Newlands, E*.,* Hancock, B*.,* Goldstein, D. P*.,* Seckl, M. J*, et al.* 2002*).* Quality of life after gestational trophoblastic disease*. Journal of Reproductive Medicine,* 47***(5****),* 387–394*.*

Winter MC, Tidy JA, Hills A et al (2016) Risk adapted single-agent dactinomycin or carboplatin for second-line treatment of methotrexate resistant low-risk gestational trophoblastic neoplasia. Gynecologic Oncology 143(3):565-570. https://doi.org/10.1016/j.ygyno.2016.10.001