NHS
Health Research Authority

Qualitative Protocol Development Tool

The research protocol forms an essential part of a research project. It is a full description of the research study and will act as a 'manual' for members of the research team to ensure adherence to the methods outlined. As the study gets underway, it can then be used to monitor the study's progress and evaluate its outcomes.

The protocol should go into as much detail about the research project as possible, to enable the review bodies to fully understand your study.

The use of this collated consensus guidance and template is not mandatory. The guidance and template are published as standards to encourage and enable responsible research.

The document will:

- Support researchers developing protocols where the sponsor does not already use a template
- Support sponsors wishing to develop template protocols in line with national guidance
- Support sponsors to review their existing protocol template to ensure that it is in line with national guidance.

A protocol which contains all the elements that review bodies consider is less likely to be delayed during the review process because there will be less likelihood that the review body will require clarification from the applicant.

We would appreciate self-declaration of how you've used this template so we are able to measure its uptake.

Please indicate the compatibility of this template with any existing templates you already use by stating one of the following on the front of each submitted protocol:

- **This protocol has regard for the HRA guidance and order of content; OR**
- **This protocol has regard for the HRA guidance; OR**
- **This protocol does not have regard to the HRA guidance and order of content**

NHS
Health Research Authority

SHORT TITLE/ACRONYM

FULL/LONG TITLE OF THE STUDY
Comparative Analysis of Pain Relief between KAPT Block and Paracervical Block for Outpatient Hysteroscopy Procedures at Kings Mill Hospital

SHORT STUDY TITLE / ACRONYM

Comparing 2 different local anaesthetic techniques for outpatient hysteroscopy Procedures

PROTOCOL VERSION NUMBER AND DATE

V 3.0
26/4/24

RESEARCH REFERENCE NUMBERS

IRAS Number:339976

SIGNATURE PAGE

The undersigned confirm that the following protocol has been agreed and accepted and that the Chief Investigator agrees to conduct the study in compliance with the approved protocol and will adhere to the principles outlined in the Declaration of Helsinki, the Sponsor's SOPs, and other regulatory requirement.

I agree to ensure that the confidential information contained in this document will not be used for any other purpose other than the evaluation or conduct of the investigation without the prior written consent of the Sponsor.

I also confirm that I will make the findings of the study publically available through publication or other dissemination tools without any unnecessary delay and that an honest accurate and transparent account of the study will be given; and that any discrepancies from the study as planned in this protocol will be explained.

For and on behalf of the Study Sponsor:

Signature: Date:
.....
......./...../.....

Name (please print):
.....

Position:
.....

Chief Investigator:

Signature: Date:
.....

Name: (please print):

Dr Raphael Laiyemo

LIST of CONTENTS

GENERAL INFORMATION	Page No.
HRA PROTOCOL COMPLIANCE DECLARATION	i
TITLE PAGE	ii
RESEARCH REFERENCE NUMBERS	ii
SIGNATURE PAGE	iii
LIST OF CONTENTS	iv
KEY STUDY CONTACTS	v
STUDY SUMMARY	v
FUNDING	vi
ROLE OF SPONSOR AND FUNDER	vi
ROLES & RESPONSIBILITIES OF STUDY STEERING GROUPS AND INDIVIDUALS	vi
STUDY FLOW CHART	vii
SECTION	
1. BACKGROUND	1
2. RATIONALE	
3. THEORETICAL FRAMEWORK	
4. RESEARCH QUESTION/AIM(S)	
5. STUDY DESIGN/METHODS	
6. STUDY SETTING	
7. SAMPLE AND RECRUITMENT	
8. ETHICAL AND REGULATORY COMPLIANCE	
9. DISSEMINATION POLICY	
10. REFERENCES	
11. APPENDICES	

NHS
Health Research Authority

SHORT TITLE/ACRONYM

KEY STUDY CONTACTS

Chief Investigator	raphael.laiyemo@nhs.net
Study Co-ordinator	Mohamed Saleh Mohamed.saleh@nhs.net
Sponsor	Sherwood Forest Hospitals NHS Foundation Trust.
Joint-sponsor(s)/co-sponsor(s)	None
Funder(s)	None
Key Protocol Contributors	Mr Raphael Laiyemo raphael.laiyemo@nhs.net
Committees	

STUDY SUMMARY

Study Title	**Comparative Analysis of Pain Relief between KAPT Block and Paracervical Block for Outpatient Hysteroscopy Procedures at Kings Mill Hospital**
Internal ref. no. (or short title)	The KAPT-Para Block Trial
Study Design	48 patients attending outpatient hysteroscopy, divided into two groups. One group will have Paracervical block, the other group will have KAPT block. Questionnaire will be handed over during and after the procedure to assess the pain scores.
Study Participants	Patients having outpatient hysteroscopy procedures
Planned Size of Sample (if applicable)	48 patients divided in to two groups
Follow up duration (if applicable)	N/A
Planned Study Period	6 MONTHS from 1st patient recruitment. September 2024.
Formal study end date	January 2025 after all data is collected and analysed.
Research Question/Aim(s)	Which local anaesthetic provided more pain relief for outpatient hysteroscopy procedures.

Commented [ST(FHNFT1]: @helen pool

ROLE OF STUDY SPONSOR AND FUNDER

ROLES AND RESPONSIBILITIES OF STUDY MANAGEMENT COMMITEES/GROUPS & INDIVIDUALS

NHS
Health Research Authority

SHORT TITLE/ACRONYM

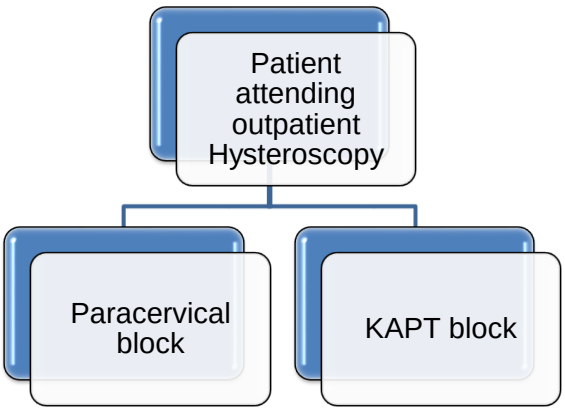
PROTOCOL CONTRIBUTORS

KEY WORDS:

1. Outpatient Hysteroscopy Pain Management
2. KAPT Block in Gynaecological Procedures
3. Paracervical Block Efficacy
4. Local Anaesthesia in Hysteroscopy
5. Comparative Analgesia in Gynaecology
6. Pain Relief Techniques in Outpatient Gynaecological Procedures

STUDY FLOW CHART

Aim: To determine which method, KAPT Block or Paracervical Block, offers superior pain relief at critical stages of the outpatient hysteroscopy procedure: during cervical dilatation, throughout the procedure, and 10 minutes post-procedure. This will involve a detailed analysis of pain scores at these specific time intervals.



Patient to complete a visual analogue pain score questionnaire

SHORT TITLE/ACRONYM

STUDY PROTOCOL

Comparative Analysis of Pain Relief between KAPT Block and Paracervical Block for Outpatient Hysteroscopy Procedures at Kings Mill Hospital

1 BACKGROUND

KAPT Block:

The King's Mill Anterior-Posterior and Transverse (KAPT) Block, first described in 2015 and presented in 2016, represents a significant advancement in the field of pain management for gynaecological procedures, particularly outpatient hysteroscopy. This type of paracervical block specifically targets the Lee-Frankenhauser (LF) plexus, a part of the Inferior Hypogastric Plexus (IHP), within the Uterosacral Ligament Complex (USLC). The KAPT Block is strategically applied 1.65-3.3cm distal to the cervical insertion of the USLC, a region dense with nerve fibers. Its precise application effectively denervates the cervix and fundus by transecting the LF plexus under the terminal 2.5cm of the USLC.

The efficacy of the KAPT Block was first demonstrated in a prospective observational study presented at the RCOG World Congress in 2016. In this study involving 37 patients, the KAPT Block showed promising results with a mean pain score of 0.704/10 (SD ± 0.24) for Myosure® procedures and 1.2/10 (SD ± 0.44) for Novasure. Importantly, no procedures had to be abandoned due to pain.

A subsequent prospective study with 73 patients (53 undergoing Myosure® and 20 Novasure® procedures) confirmed these findings. The study reported a mean pain score of 0.41/10 for Myosure® and 0.8/10 for Novasure. Notably, a significant proportion of these patients were pre-menopausal and suffered from dysmenorrhea, highlighting the block's effectiveness across various patient profiles.

Paracervical block:

Paracervical block (PCB) is a widely used local anaesthetic technique in outpatient hysteroscopy, but no single method has been established as unequivocally superior. Despite some uncertainty in the literature regarding its superiority, a meta-analysis of 20 trials involving 2851 participants indicated that paracervical injection significantly reduced pain in women undergoing hysteroscopy as outpatients. Intracervical and paracervical injections of local anaesthetic were found to be effective, while transcervical and topical applications did not show significant pain reduction. The meta-analysis supported the conclusion that paracervical local anaesthetic injection is the best method for pain control in outpatient hysteroscopy. However KAPT Block was not included in this meta-analysis

2 RATIONALE

1. Randomised control trial to evaluate and compare the pain scores of women undergoing outpatient hysteroscopy when administered either the KAPT Block or Paracervical Block, with an emphasis on understanding the relative efficacy of these two anaesthetic techniques.

2. To determine which method, KAPT Block or Paracervical Block, offers superior pain relief at critical stages of the outpatient hysteroscopy procedure: during cervical dilatation, throughout the procedure, and 10 minutes post-procedure. This will involve a detailed analysis of pain scores at these specific time intervals.

3 THEORETICAL FRAMEWORK

The theoretical framework for the study "Comparative Analysis of Pain Relief between KAPT Block and Paracervical Block for Outpatient Hysteroscopy Procedures" is based on two key anaesthesia techniques:

1. **KAPT Block**: A sophisticated block targeting the Lee-Frankenhauser plexus, KAPT Block is effective in denervating the cervix and fundus. Its efficacy, demonstrated through observational studies, shows promising pain relief outcomes in outpatient hysteroscopy.
2. **Paracervical Block (PCB)**: A commonly used technique in outpatient hysteroscopy, PCB's effectiveness is supported by a meta-analysis showing significant pain reduction. Although its superiority is debated, it remains a preferred method for pain control in these procedures.

The study aims to compare effectiveness in pain management for outpatient hysteroscopy, thus addressing the gaps in current understanding and practice.

4 Technique

Paracervical Block Technique:

- The primary technique involves injecting Citanest into the cervical stroma at the cervicovaginal junction. This can be done in two ways:

- Four-point injection at 2, 4, 8, and 10 o'clock positions.

- Two-point injection at 4 and 8 o'clock positions only.

KAPT Block Technique:

1. Inject 0.2ml of Citanest directly into the cervical stroma at 6 and 12 o'clock to facilitate grasping with a tenaculum.

2. Measure 3cm inferolateral from the external os towards 5 and 7 o'clock on both sides using a Pipelle sampler to locate the Lee-Frankenhauser plexus in the Uterosacral Ligament Complex (USLC).

3. Perform an inject-withdrawal technique, injecting a total of 4ml at the measured sites on each side, distributed as follows:

- 2ml directly (Anterior to Posterior) at 5 o'clock and 7 o'clock. Sideways elevation of the lower lip of the cervix with a tenaculum can facilitate this step.

- 2ml from the medial to the lateral aspect at 5 o'clock and 7 o'clock, angling the syringe slightly for ease.

- The depth of injection should be 25mm, approximately ¾ of the length of the dental syringe needle.

4. The objective is to infiltrate the LF plexus in both the supero-inferior and lateral planes.

5. Allow a pause of at least 3 minutes before commencing the procedure.

5 RESEARCH QUESTION/AIM(S)

How do the pain relief outcomes of the King's Mill Anterior-Posterior and Transverse (KAPT) Block compare to the Paracervical Block in women undergoing outpatient hysteroscopy procedures

5.1 Objectives

1. To conduct a randomised control trial evaluating and comparing the pain scores of women undergoing outpatient hysteroscopy when administered either the KAPT Block or the Paracervical Block.
2. To determine which method, KAPT Block or Paracervical Block, offers superior pain relief at critical stages of the outpatient hysteroscopy procedure: during cervical dilatation, throughout the procedure, and 10 minutes post-procedure, through detailed analysis of pain scores at these specific intervals.

The out patients hysteroscopy procedures will include:

Myosure removal of polyps

Myosure removal of fibroids

Thermablate endometrial ablation

5.2 Outcome

1. **Pain Score Comparison**: Determination of differences in pain scores between the KAPT Block and Paracervical Block at three key stages: during cervical dilatation, throughout the hysteroscopy procedure, and 10 minutes post-procedure.
2. **Patient Comfort Analysis**: Assessment of patient comfort levels and procedural tolerability with each anaesthetic technique, contributing to patient-centred care in outpatient settings.
3. **Clinical Efficacy Evaluation**: Evaluation of the clinical efficacy of each block technique, aiding in evidence-based decision-making for pain management in outpatient hysteroscopy.

6 STUDY DESIGN and METHODS of DATA COLLECTION AND DATA ANALYIS

This study will be a randomized control trial, comparing the efficacy of KAPT Block and Paracervical Block in outpatient hysteroscopy. This approach will provide robust, comparative data on the effectiveness of these anaesthetic techniques.

Data Collection Methods:

- **Patient Questionnaires with Visual Pain Score**: Patients will complete questionnaires with a visual analogue scale (VAS) to self-report their pain levels at various stages of the procedure (during cervical dilatation, the procedure itself, and 10 minutes post-procedure). This method allows for direct, objective assessment of pain from the patient's perspective.

Data Analysis Methods:

- **Quantitative Analysis**: The collected pain scores will be statistically analysed to determine the effectiveness of each anaesthetic technique. This analysis will involve comparing mean pain scores and assessing variations in pain experiences among patients.

Data Management:

- Data will be de-identified to maintain patient confidentiality.
- Electronic data will be securely stored and encrypted. Only authorized personnel will have access.
- Hard copies, if any, will be kept in a secure location.
- After the study, data will be archived as per institutional and legal guidelines.

Software: Statistical software will be used for quantitative data analysis.

7 - Patient Public Involvement (PPI)PPI groups have been involved with the study proposal process. A number of patients were asked specific questions regarding the study design and purpose. All information has been stored for future reference and publication.

A total of 10 patients were approached to complete a short questionnaire. The answers to the questionnaire concluded that 100 percent of patients agreed that the study would be beneficial and is an important subject. The vast majority of patients stated they would participate in the study and the information provided is clear and concise.

8 STUDY SETTING

The study will be conducted at Kings Mill Hospital, which has a significant number of outpatient hysteroscopy procedures annually. This setting provides an ideal environment to evaluate and compare the effectiveness of the KAPT Block and Paracervical Block in pain management.

SAMPLE AND RECRUITMENT

Eligibility Criteria

8.1 Inclusion criteria

- Women attending outpatient hysteroscopy procedures at Kings Mill Hospital.

- Age 18 years and above.

- Willing to participate and able to provide informed consent.

8.1.2 Exclusion criteria

- Women with known contraindications to local anaesthetics.

- Women with a history of allergic reactions to the anaesthetics used.

8.2 Sampling

8.2.1 Size of sample

The sample size is based on previous studies indicating a significant difference in pain scores between different anaesthetic techniques. Prior research by Noor et al. (2021) showed a noticeable variation in pain scores with a relatively small sample. Our study aims for a sample size of 48 patients, considering a 10% increase to account for potential dropout. This size is determined to achieve adequate power (80%) and a significant level (α error = 0.05), ensuring the study is sufficiently powered to detect meaningful differences in pain scores between the KAPT Block and Paracervical Block.

8.2.2 Sampling technique

Participants will be selected randomly from women attending outpatient hysteroscopy at Kings Mill Hospital. This random sampling approach ensures that the sample is representative of the population receiving these procedures. This strategy aligns with the study's methodological framework, allowing for a fair comparison between the two anaesthetic techniques without bias, and it is reflective of the theoretical framework focusing on pain management in outpatient gynaecological procedures.

8.3 Recruitment

The recruitment process for the study involves identifying and enlisting participants who meet the eligibility criteria. Women attending outpatient hysteroscopy procedures at Kings Mill Hospital will be screened for eligibility. This screening will include verifying their age (18 years and above), assessing for any contraindications to the local anaesthetics used in the study, and ensuring they are willing and able to provide informed consent. Participants will receive a patient information leaflet about the study along with their appointment letter, sent at least one week before their scheduled procedure. This ensures they have ample time to consider participation. The information leaflet will detail the study's purpose, risks, benefits, and what participation entails. Consent will be obtained from those who agree to participate when they attend their appointment, ensuring informed decision-making. Those who agree to participate will then be enrolled in the study and randomly assigned to either the KAPT Block or Paracervical Block group.

** stratify here

8.3.1 Sample identification

- **Identification by Clinical Care Team**: Members of the clinical care team will use patient records to verify eligibility based on the inclusion and exclusion criteria.
- **Resources for Identification**: The clinical team will utilise hospital databases and outpatient appointment schedules to identify potential participants.
- **Personal Information Access**: Only members of the direct care team will have access to personal data to send any study information in advance of the appointment.
-
- **Payments to Participants**: Participants will not receive payments

8.3.2 Consent

The protocol for obtaining informed consent includes:

- **Discussion**: An in-depth discussion between the potential participant or their legally acceptable representative and an individual knowledgeable about the research. This covers the study's nature, objectives, and potential risks.
- **Written Material**: Presentation of written information, such as an information leaflet and consent documents, approved by the Research Ethics Committee (REC), adhering to local and legal requirements.
- **Opportunity for Questions**: Potential participants will have the chance to ask questions about the study.
- **Assessment of Capacity**: Ensuring participants can understand the research's purpose, what it involves, its benefits and risks, alternatives to participation, and can retain this information to make an informed decision.
- **Voluntary Participation**: Confirming that the participant's choice to participate is free from coercion.

9 ETHICAL AND REGULATORY CONSIDERATIONS

This research adheres to ethical and regulatory frameworks, ensuring participant safety and dignity. The risks and benefits to participants are clearly outlined, balancing scientific inquiry with participant welfare. Special considerations are made for the specific needs of the sample, particularly focusing on pain management in outpatient hysteroscopy. The data collection methods, including patient questionnaires, uphold participant dignity and privacy.

The study protocol aligns with relevant legislation and requirements for conducting research at proposed sites, including adherence to guidelines set by the Health Research Authority and local ethical review boards. This ensures the study is conducted with the highest ethical standards, respecting participant rights, and ensuring data integrity.

9.1 Assessment and management of risk

Identify potential risks, including emotional distress or discomfort, during the procedure. The healthcare professionals are trained to deal appropriately including abandoing the procedure.

9.2 Research Ethics Committee (REC) and other Regulatory review & reports

- Prior to the study's commencement, a favourable opinion will be sought from a Research Ethics Committee (REC), including approval of the study protocol, informed consent forms, and other relevant documents.
- For NHS REC-reviewed research, any substantial amendments requiring REC review will not be implemented until approval is received.
- All correspondence with the REC will be retained.
- The Chief Investigator is responsible for producing annual reports and notifying the REC of the study's end.
- An Annual Progress Report (APR) will be submitted to the REC within 30 days of the anniversary date of the favourable opinion and annually until the study's conclusion.
- In case of premature study termination, the Chief Investigator will inform the REC, including reasons for termination.
- A final report, including results and any publications/abstracts, will be submitted to the REC within one year of the study's end.

Regulatory Review & Compliance

- Before any site can enrol patients into the study, the Chief Investigator/Principal Investigator or designee will ensure that appropriate approvals from participating organisations are in place. Specific arrangements on how to gain approval from participating organisations are in place and comply with the relevant guidance. Different arrangements for NHS and non NHS sites are described as relevant.
- For any amendment to the study, the Chief Investigator or designee, in agreement with the sponsor will submit information to the appropriate body in order for them to issue approval for the amendment. The Chief Investigator or designee will work with sites (R&D departments at NHS sites as well as the study delivery team) so they can put the necessary arrangements in place to implement the amendment to confirm their support for the study as amended.

Amendments

- **Submission of Amendments**: If substantial amendments are required, the sponsor must submit a notice to the REC. The REC will respond within 35 days of receipt.

- **Responsibility and Categorization**: The sponsor determines whether an amendment is substantial or non-substantial for REC submission.
- **Notification to Specialist Bodies**: Any substantial amendment affecting the study's opinion may require notification to other specialist review bodies, such as the Confidentiality Advisory Group (CAG).
- **Communication with Stakeholders**: Amendments should be communicated to the national coordinating function, participating organizations, and R&D offices of participating sites. Even non-substantial amendments for REC might require notification to NHS R&D.
- **Amendment Tracking**: The protocol should track amendment history and identify the most recent protocol version.

9.3 Peer review

The peer review process for the study was conducted by an internal department and will not adhere to the NIHR CRN standard for peer review. As the study does not involve large, multicenter components, it does not require a higher level of peer review. The review process will be managed internally within the host institution.

9.4 Patient & Public Involvement

The Patient will complete the Questionnaire following outpatient hysteroscopy which will be the basis of the research to assess the visual pain score.

9.5 Protocol compliance

- **Documentation of Deviations:** Any accidental protocol deviations must be documented and reported to the Chief Investigator and Sponsor immediately.
- **Handling Recurrent Deviations:** Frequent deviations from the protocol are not acceptable and require immediate action. They could potentially be classified as a serious breach, necessitating further investigation and resolution.

9.6 This study will comply with the Data Protection Act 1998 in handling patient data. The protocol includes:

- **Data Collection and Security**: Personal information will be collected and stored securely.
- **Access Limitation**: Access to data will be limited to a minimum number of individuals necessary for quality control, audit, and analysis.
- **Data Confidentiality in Transmission**: Procedures to preserve confidentiality when transmitting data to sponsors and co-investigators.
- **Data Storage Duration**: Data will be only stored during the research period.
- **Data Custodian**: Chief and co-investigators will be responsible for Data Custody.

9.7 Indemnity

The study involves patients who are already booked for outpatient hysteroscopy procedures. The only additional step for these patients will be completing a questionnaire, which does not significantly alter their standard care or expose them to additional risks beyond those already accepted in their planned medical procedure. As such, special indemnity arrangements for this study are not required.

9.8 Access to the final study dataset

- **Identified Individuals**: Access to the final dataset will be restricted to designated individuals within the research team, primarily the Chief Investigator and data analysts.
- **No Multicentre Restrictions**: Since this is not a multicentre study, the concerns about premature data release by individual sites are not applicable.
- **Formal Requests for Data Access**: Requests for dataset access by other team members will be considered on a case-by-case basis, requiring approval based on specified research objectives.
- **Consent for Secondary Analysis**: If there is an intent to use the dataset for secondary analysis, participant consent will be obtained, and this will be reflected in all patient documentation.

10 DISSEMINIATION POLICY

10.1 Dissemination policy

1. **Data Ownership**: The data from the study will be owned by the investigators.
2. **Accessibility of Report**: The final study report will be published for accessibility to interested parties.
3. **Publication Rights**: Participating investigators have the right to independently publish data from the study.
4. **No Time Limits or Review Requirements**: There are no specific time limits or review requirements for publications related to the study.

10.2 Authorship eligibility guidelines and any intended use of professional writers

- **Eligibility for Authorship:** Only investigators involved in the study will be eligible for authorship on the final study report.

11 REFERENCES

1. Fujii M, Sagae S, Sato T, Tsugane M, Murakami G, Kudo R. Investigation of the localization of nerves in the uterosacral ligament: determination of the optimal site for uterosacral nerve ablation. Gynecol Obstet Invest. 2002;54 Suppl 1:11-6; discussion 16-17.

2.Paracervical uterine denervation by transection of the cervical plexus for the relief of dysmenorrhea - ScienceDirect [Internet]. [cited 2023 Aug 25]. Available from:

https://www.sciencedirect.com/science/article/abs/pii/0002937855902829

3.KAPT block: a new innovative precision block for operative outpatient hysteroscopy |

Cochrane Library [Internet]. [cited 2022 Mar 3]. Available from:

https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01179088/full

4.Cooper NAM, Khan KS, Clark TJ. Local anaesthesia for pain control during outpatient hysteroscopy: systematic review and meta-analysis. BMJ. 2010 Mar 23;340c1130.

5.Tangsiriwatthana T, Sangkomkamhang U, Lumbiganon P, Laopaiboon M. Paracervical local anaesthesia for cervical dilatation and uterine intervention. COCHRANE DATABASE Syst Rev. 2013;(9)

6. Noor, N., Roy, K.K., Zangmo, R., Das, A., Rai, R., Kumari, A., et al. (2021). Role of para-cervical block in reducing immediate postoperative pain after total laparoscopic hysterectomy: a prospective randomized placebo-controlled trial. Obstet. Gynecol. Sci. 64:122-129.

12. APPENDICIES

12.1 Appendix 1- Required documentation

12.2 Appendix 2 – Schedule of Procedures (Example)

Procedures	**Visit**
	Screening
Informed consent	x
Demographics	x
Medical history	x
Treatment	x
Questionnaire	x
Interview	x

12.3 Appendix 3 – Amendment History

Amendment No.	**Protocol version no.**	**Date issued**	**Author(s) of changes**	**Details of changes made**

List details of all protocol amendments here whenever a new version of the protocol is produced.

Protocol amendments must be submitted to the Sponsor for approval prior to submission to the REC.