UCSD Human Research Protections Program
New Biomedical Application
RESEARCH PLAN INSTRUCTIONS

These are instructions are for completing the Research Plan that is available in MS Word format from the HRPP website.
The headings on this set of instructions correspond to the headings of the Research Plan.
General Instructions: Enter a response in for all topic headings.
Enter "Not Applicable" rather than leaving an item blank if the item does not apply to this project.

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1. PROJECT TITLE

Pain control for intrauterine device placement: A randomized controlled trial of paracervical block

2. PRINCIPAL INVESTIGATOR

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3. FACILITIES

University of California San Diego – Medical Offices South Women's Health Clinic, Perlman Outpatient Clinic.
Planned Parenthood of the Pacific Southwest
Research procedure will be conducting at all of the above facilities.

4. ESTIMATED DURATION OF THE STUDY

12 months, from August 2014 to August 2015

5. LAY LANGUAGE SUMMARY OR SYNOPSIS (no more than one paragraph)

Intrauterine device (IUD) placement can be painful for patients during and after the procedure. Fear of pain from IUD insertion can be a barrier to obtaining this highly effective long acting reversible contraception. Currently there are no proven effective methods for reduction of pain during and after placement of modern IUDs. Paracervical block pain may decrease this placement pain.

6. SPECIFIC AIMS

The primary aim of this study is to determine whether a paracervical block (PCB) decreases pain associated with intrauterine device (IUD) placement compared to no parcervical block.

We hypothesize that administration of a PCB of 20 mL 1% buffered lidocaine prior to IUD placement will decrease pain scores by at least 15mm on a visual analog scale at various time points during IUD placement when compared to no paracervical block.

7. BACKGROUND AND SIGNIFICANCE

Modern IUDs are highly effective long acting reversible forms of contraception. The Mirena IUD is 99.8% effective and the Paragard copper IUD is 99.2% effective in preventing pregnancy (Zieman 2010). Fear of IUD placement can be a barrier to obtaining this highly effective form of birth control. The current standard of care for pain management during and after IUD placement is no medication, as randomized control trials published to date have limited data regarding use of medications to decrease pain. There has been one trial to suggest that the use of naproxen with 1% lidocaine paracervical block (PCB) compared to PCB alone may decrease pain *after* IUD placement in primarily nulliparous patients. However, this study was with the much wider and no longer available Dalkon Shield IUD(Massey 1974). In addition, this study did not show any significant decrease in pain scores *during* IUD placement. Studies to evaluate effectiveness of ibuprofen and misoprostol have shown no significant decrease in pain scores during and after IUD insertion, although the majority of participants in these studies were multiparous (Jensen 1998, Hubacher 2006, Saav 1997). There is some suggestion that 2% lidocaine gel one minute prior to IUD insertion may have some decrease in pain, although this study was poorly designed (Oloto 1996).

Although there is no standard of care in regards to pain medication administration prior to IUD placement, providers often suggest paracervical prior IUD insertion among nulliparous women. Therefore it would be beneficial to investigate this intervention.

8. PROGRESS REPORT

Not applicable.

9. RESEARCH DESIGN AND METHODS

Hypothesis: The hypothesis is that administration of a PCB prior to IUD placement will decrease patient perception of pain associated with IUD placement among nulliparous women

In order to investigate this hypothesis the following study design is proposed:
Randomization:
Participants will be randomized to receiving the PCB or no PCB. The participant will be blinded to the randomization. The the block size will be 4. The group assignment will be in opaque sealed envelope that will be opened clinic nurse and not disclosed to the patient or provider. The clinician will then administer either the PCB or the sham.

Intervention: A 20 mL 1% buffered liodaine PCB will be injected prior to intrauterine device insertion. The patient will not be charged for the study drug. All costs will be covered by the investigator (this is also stated in the consent form).

Our PCB will be based on the most commonly used techniques reported (O'Connell, et al., 2009; Renner, et al., 2009):

- A 20 mL PCB with 18 mL of 1% lidocaine buffered with 2 mL 8.4% sodium bicarbonate (E. R. Wiebe, 1992; E. R. WiebeRawling, 1995)
- 2 mL are injected at the tenaculum site; 12 o'clock of the very superficially into the cervix (Rabin et al., 1989; Zullo et al., 1999).
- The tenaculum is placed at 12 o'clock
    - The remaining 18 mL are slowly injecte into the vaginal fornices and equally distributed at 4 and 8 o'clock. The injection is continuous from superficial to deep (3cm) to superficial (injecting with insertion and withdrawal) (Cetin, 1997; E. R. Wiebe, 1992).
    - Insertion of the IUD will occur after application of the block (Phair, et al., 2002; Renner, et al., 2009).

In the non-intervention group, the clinician performs a sham paracervical block during:

- 2 mL are injected at the tenaculum site; 12 o'clock of the very superficially into the cervix
- The tenaculum is placed at 12 o'clock
- Over 60 seconds, without moving the tenaculum a capped needle gently touches the vaginal sidewall at the level of the external os at 4 and 8 o'clock.

All participants are counseled during the (Sham-) PCB and while placing the tenaculum using language, e.g. "You may or may not feel a pinch…" to promote blinding. Everyone except for the clinician is blinded.

Outcomes:

1) Sociodemographic and clinical data: age, race, education level, obstetric and gynecologic history, contraceptive history, level of menstrual symptoms
2) Primary outcome: Distance (mm) from the left of the 100-mm VAS scale (reflecting magnitude of pain) recorded at time of IUD placement. We will assess pain at various time points (including secondary outcomes) immediately upon completion of the respective step. Pain will be assessed using a 100 mm visual analogue scale with the anchors 0 = none, 100 mm = worst imaginable.
3) Secondary outcomes:

a. Pain (VAS scale):
    i. anticipated pain, prior to study drug administration
    ii. baseline
    iii. with speculum insertion
    iv. with tenaculum placement
    v. with uterine sounding
    vi. 5 min after IUD placement
    vii. intrapersonal pain changes (calculated in analysis)
    viii. Overall pain with IUD insertion procedure
b. satisfaction
    i. with pain control
        1. Likert scale questions
            a. How did the pain with IUD insertion compared to the expected pain?
            b. "There are some things about the pain control I received that could be better."
            c. Would you choose the same pain control method for a future IUD insertion?
        2. Recommendation to a friend (Would you recommend this pain control method to a friend for IUD insertion?)
        3. VAS scale; anchors 0 = not, 100mm = extremely satisfied
    ii. overall IUD insertion experience (VAS scale; anchors 0 = not, 100mm = extremely satisfied)
c. adverse events
d. need for additional pain medication
e. participants belief, if they were in the intervention or control group

For women who cannot tolerate placement of the IUD, this may mean that IUD placement may need to be aborted. In this circumstance, the aborted IUD placement will be documented. The patient will still be compensated for participating in the study. Additional pain management for these patients will be left to the discretion of the clinician.

Power Calculation:
The calculation of the sample size was based on controls from a previous study involving pain control for IUD placement and previous studies using a 100mm visual analogue scale (VAS). The standard deviation for pain with IUD placement in the previous studies in the United States is 23-35 mm. We will use a standard deviation of 30mm for our sample size calculation. We defined a 15 mm difference on the VAS to be clinically significant based on prior studies that reported a range of clinically significant differences. To have 80% power to detect a mean difference between groups of 15 mm on the pain scale, 64 participants are required. A two-tailed test and a Type I error rate of 5% is assumed. Since women are given the option of discontinuation of participation in the study any time during the procedure, we will incorporate at dropout rate of 10% therefore it is expected that 144 patients (72 per arm) will be randomized. These will be nulliparous women. It is estimated that over 500 IUDs are placed in each year at the Women's Health Clinic at Medical Offices South and Planned Parenthood of the Pacific Southwest.

10. HUMAN SUBJECTS

Inclusion criteria: Nulliparous women ages 18-50, who are English or Spanish speaking, who present for intrauterine device placement for contraception or menorrhagia (in the case of Mirena IUD insertion).
Exclusion criteria:

1) Pregnancy
2) Any *diagnosed* chronic pain issues (i.e. fibromyalgia, endometriosis, dysmenorrhea, irritable bowel syndrome, interstitial cystitis)
3) If the patient has taken any pain medications within 6 hours of enrollment, including aspirin or other NSAIDs
4) Misoprostol administration within 24 hours of enrollment
5) History of prior IUD insertion
6) Known contraindications to IUD

11. RECRUITMENT

There will be recruitment flyers in the clinic with contact information for more information on the study. Patients will be informed about the study by any of the co-investigators as well as physicians seeing the patient, who will then assess if the patient meets any exclusion criteria. We will use the below recruitment script:

"We are conducting a study on pain control for IUD placement. You are eligible to participate because you having an IUD placed today and have not delivered a baby. The study is to learn about pain control if lidocaine is used before IUD placement versus with no lidocaine before IUD placement. Currently the common medical practice is not use lidocaine before IUD placement."

12. INFORMED CONSENT

The patient will be consented by research assistant John Paul Farala or one of the co-investigators. The consent process may occur prior to the scheduled day for the IUD placement or on the day of IUD placement. The consent process will occur in the patient room. Consent and study items will be translated into Spanish.

13. ALTERNATIVES TO STUDY PARTICIPATION

If the patient chooses not to participate in the study they would receive the standard of care, which is no specific pain medication.

14. POTENTIAL RISKS

1) Loss of confidentiality
2) Pain with paracervical block injection
3) Side effects of paracervical including dizziness, vasovagal sysmptoms

15. RISK MANAGEMENT PROCEDURES AND ADEQUACY OF RESOURCES

1) Ensuring confidentiality by assigning a patient study number and avoiding the use of patient identifiers
2) Informing patient of possible pain at the site of injection
3) The clinic is equipped with medical supplies if a participant has dizziness or vasovagal symptoms. These symptoms are usually transient.
4)

16. PRIVACY AND CONFIDENTIALITY CONSIDERATIONS INCLUDING DATA ACCESS AND MANAGEMENT

There will be a need for medical record access to assess co-morbidities and to follow up need for additional pain medications. Study data will be secured in a locked cabinet/filebox, and only those directly involved in the study will have access to this including the investigators who will process it, Sheila Mody, MD MPH, Lisa Bayer MD MPH and the research assistant who will be organizing the files into the cabinet once data is collected. Once data is transferred onto an electronic file, it will also be saved under a secure file on a computer requiring a password for log-in.

17. POTENTIAL BENEFITS

Patients may not experience direct benefit from participation in this study. However, we hope that this study will help us determine whether or not paracervical block is effective in reducing pain with and immediately after IUD placement. We hope that this study may change the practice of pain relief with IUD placement for women in the future.

18. RISK/BENEFIT RATIO

The benefit of possibly decreased pain during and after intrauterine device placement outweighs the small risks of pain during paracervical block administration.

19. EXPENSE TO PARTICIPANT

None

20. COMPENSATION FOR PARTICIPATION

$10 Target gift card
Study medication provided and administered at no charge to the patient

21. PRIVILEGES/CERTIFICATIONS/LICENSES AND RESEARCH TEAM RESPONSIBILITIES

Co-investigators:
Sheila Mody MD, MPH, Lisa Bayer MD MPH and Sierra Washington MD and John Paul Farala will be organizing and processing the study data. They will also be involved in patient recruitment and consenting for participation in the study. Moena Nishikawa will be helping with patient recruitment and consenting for participation in the study. Berenice Jimenez will be helping with patient recruitment and consenting for participation in the study.

22. BIBLIOGRAPHY

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23. FUNDING SUPPORT FOR THIS STUDY

WRHR Grant 5K12001259-12

24. BIOLOGICAL MATERIALS TRANSFER AGREEMENT

Not applicable.

25. INVESTIGATIONAL DRUG FACT SHEET AND IND/IDE HOLDER

Not applicable.

26. IMPACT ON STAFF

May increase time spent per patient. There will be a strong effort to consent patients prior to their scheduled appointment, such as the visit prior to their scheduled IUD placement, in order minimize the effect on clinic flow the day of the IUD placement. The clinic manager will be notified of possible changes to clinic work flow.

27. CONFLICT OF INTEREST

None

28. SUPPLEMENTAL INSTRUCTIONS FOR CANCER-RELATED STUDIES

Not applicable.

29. OTHER APPROVALS/REGULATED MATERIALS

Not applicable.

30. PROCEDURES FOR SURROGATE CONSENT AND/OR DECISIONAL CAPACITY ASSESSMENT

Not applicable.