**CLINICAL PRACTICE GUIDELINE**

# Intrauterine Pressure Transducer

**This document should be read in conjunction with the Disclaimer**

## Aims

- To measure the frequency, duration and pressure of uterine contractions, this may be required in the clinical circumstance of:
  - maternal obesity
  - delay in cervical dilatation
  - non reassuring FHR patterns
  - titration of oxytocin infusion in woman with risk factors such as high parity
- To collect an amniotic fluid sample for laboratory analysis.
- To perform amnioinfusion.

## Key points

1. Insertion of IUPC is to be done by Obstetric Registrar, Senior Registrar or Consultant.
2. The intrauterine pressure catheter (IUPC) should not be left in situ for longer than 24 hours.
3. Intrauterine pressure recordings vary according to site of where the recording is taken from – higher amplitude is found in the fundus, decreasing in the middle portion of the uterus, and further decreases in the lower portion near the cervix.[1]
4. The presence of thick meconium may cause inaccurate readings of amplitude of the contractions.[1]

## Risk factors / complications [1, 2]

- Infection.
- Postpartum endomyometritis.
- Uterine perforation.
- Umbilical cord perforation, cord entanglement.
- Extra-membranous catheter placement leading to complications such as placental abruption, fetal distress, disseminated intravascular coagulation, and in rare cases anaphylactoid syndrome.

## Equipment

- Sterile pelvic pack.
- Intrauterine pressure catheter pack and 1 mL syringe.
- Lubricating gel.
- Cardiotocograph (CTG) monitor.
- Adhesive tape, optional.

## Prior to procedure

1. The obstetric Consultant or Senior Registrar should assess the suitability for insertion of an IUPC.
   - Including confirmation of placental location
2. Obtain verbal consent from woman.
3. Ensure the catheter, cable and CTG monitor are compatible **before** insertion.
   - Plug the IUPC **cable** into the CTG monitor.
4. Read the manufacturers instruction in or on the packaging of the IUPC regarding insertion.
5. Place woman in dorsal position with wedge below right buttock.

## Procedure

1. Remove catheter from package using aseptic technique.
2. Zero the system.
3. Perform vaginal examination to confirm cervical dilatation.
   - Confirm cervical dilatation.
   - Confirm or perform rupture of membranes.
4. Insert the introducer and catheter into the vagina and to the cervical os. Do not advance the introducer through the cervix.
5. Attempt to insert the catheter opposite to the placental site.
6. Gently advance the catheter into the uterus. If resistance is met at any time during insertion.
   - Pull the catheter tip back to the introducer and alter the direction of the catheter by changing direction of the introducer.
   - Determine an alternative position for placement.
   - If resistance continues cease insertion of transducer.
7. Remove the introducer by gently sliding back out of the vagina.
8. Secure the catheter to the woman's leg.
   - The catheter should be secured as close as possible to the introitus to prevent the catheter from working its way out of the uterus when it is flexed.

9. Zero the CTG monitor as required.
10. Connect the catheter to the cable.
11. Instruct the woman to cough.
12. A spike on the CTG tracing in response to a cough indicates correct positioning.

## Following procedure

1. Document in the medical records and OBITraceVue:
   - time of insertion.
   - baseline resting tone pressures in the semi-fowlers position, left and right lateral positions.
2. If an amniotic fluid sample is required remove the cap from the amnio port and collect the sample.

## Troubleshooting

If the IUPC is not recording:

- Ensure the catheter, cable and CTG monitor are compatible before insertion.
- Check the cables are plugged in and all connections are correct.
- Disconnect the catheter from the cable and inject 10mL of sterile 0.9 % sodium chloride through the amnioport. Reconnect the cap and cable.

Liaise with the medical officer who may decide to disconnect the catheter from the cable, rotate, retract or advance the catheter. Wait 15 seconds before reconnection.

## Removal of IUPC

Grasp the catheter and gently pull until fully withdrawn. Disconnect the catheter from the cable.

## References

1. Cunningham, Leveno, Bloom, Spong, Dashe, Hoffman, Casey & Sheffield. *Williams Obstetrics*. 24th. United States: McGraw Hill; 2017
2. Royal Australia and New Zealand College of Obstetricians and Gynaecologists.Intrapartum Fetal Surveillance Clinical Guideline. Third Edition. 2014

## Related WNHS policies, procedures and guidelines

Amnioinfusion

| | | | |
|---|---|---|---|
| Keywords: | IUPC, intrauterine pressure catheter, measuring contractions, IUPT, pressure transducer | | |
| Document owner: | OGID | | |
| Author / Reviewer: | LBS CMC & CDM | | |
| Date first issued: | July 2009 | | |
| Last reviewed: | March 2018 | Next review date: | March 2021 |
| Endorsed by: | MSMSC | Date: | 06/03/2018 |
| Standards Applicable: | NSQHS Standards: 1 Governance, 9 Clinical Deterioration | | |
| **Printed or personally saved electronic copies of this document are considered uncontrolled. Access the current version from the WNHS website.** | | | |