Bradford Teaching Hospitals NHS
NHS Foundation Trust

Pudendal Nerve Block

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Approved by: Originally LWF 16.10.08, reviewed 1.8.11 (no change), reviewed 9.10.13 (no change)
Review 28.11.16 (no change)

Review date: 28.11.19

Version: 4

Background

In the second stage of labour, pain largely results from distension of the lower vagina, vulva and perineum. Most of the sensory and motor innervation of these structures is supplied from the 2nd to 4th sacral nerve roots via the largest branch of the pudendal plexus, the pudendal nerve. The nerve trunk is found about 1cm proximal to the spine of the ischium and passes anterior and inferior out of the pelvic cavity.[1] Where the trunk of the nerve passes posterior to the junction of the ischial spine and the sacrospinous ligament, the nerve is medial to the internal pudendal vessels, and it is at this point that it is blocked.

Indications

Pudendal nerve blocks are of value in providing analgesia in the second and third stages of labour for both normal and instrumental delivery and for episiotomy.

Method

(Transvaginal Approach)

The patient should be placed in the lithotomy position, and after appropriate preparation the status of the presenting part and the location of the ischial spines should be determined by vaginal examination.

It is important to use a needle with a guide in order to limit the depth of submucosal penetration until the ischial spine is palpated with the tip of the index finger.

The needle is then rotated so that the stud slides down the bayonet slot, allowing it to protrude beyond the guard tube. The sacrospinous ligament lies 1cm medial and posterior to the spine.
The needle is then carefully advanced through the ligament for a distance of 1cm until a loss of resistance is appreciated and it is now lies in the area of the pudendal nerve and vessels.
After aspiration to ensure that the bevel is not in a blood vessel, a maximum of 10mls of local anaesthetic (1% lidocaine) solution is injected.

The block is then repeated on the other side with the left hand being dominant for the left pudendal nerve and the right hand used for the right side.

Lidocaine has a fast onset of action so the block should be working within 2 minutes. Test the block after this time and then wait a further two minutes However, the block should be assessed clinically prior to episiotomy or forceps insertion.

Complications

Pudendal nerve block can result in maternal haematoma, systemic toxic reaction, trauma to the sciatic nerve and puncture of the rectum. However when carried out with a full knowledge of the anatomy, physiology and associated pharmacology, it is a safe procedure with few complications.

References

1 Ellis H and Feldman S ‘Anatomy for Anaesthetists’
2 www.ncpainmanagement.com