NICE guidance

Laparoscopic uterine nerve ablation (LUNA) for chronic pelvic pain

Interventional procedures guidance
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www.nice.org.uk/guidance/ipg234

1 Guidance

1.1 The evidence on laparoscopic uterine nerve ablation (LUNA) for chronic pelvic pain suggests that it is not efficacious and therefore should not be used.

2 The procedure

2.1 Indications

2.1.1 Chronic pelvic pain is commonly described as pain felt below the umbilicus which lasts for at least 6 months. Chronic pelvic pain includes dysmenorrhoea and dyspareunia. Secondary dysmenorrhoea describes period pain associated with a physical cause, whereas in primary

dysmenorrhoea no underlying cause is identified.

2.1.2 One of the most common causes of chronic pelvic pain is endometriosis. In this condition, tissue that is normally found lining the inside of the uterus is also present outside the uterus, usually in the pelvic cavity. Definitive diagnosis is usually by laparoscopy or laparotomy. Other causes of chronic pelvic pain include pelvic inflammatory disease, pelvic congestion syndrome, nerve entrapment, neuropathic pain and postsurgical pain. In some patients a cause cannot be identified.

2.1.3 Treatment for chronic pelvic pain depends on the underlying cause. Treatment strategies for endometriosis depend on several factors including the patient's age, symptoms, whether the patient wants to have children and whether there is associated subfertility. Hormonal treatments aim to stop ovulation, allowing the endometrial deposits to regress. Conservative surgery via laparoscopy or laparotomy aims to remove the endometrial deposits, usually by laser or electrocautery. Hysterectomy, with or without removal of the ovaries, may be considered for severe symptoms that do not respond to conservative treatment.

2.1.4 When the cause of chronic pelvic pain cannot be identified, conservative treatments include non-steroidal anti-inflammatory drugs or a trial of the oral contraceptive pill. Surgical treatment options which have been used if conservative measures are inadequate include vaginal uterosacral ligament resection, presacral neurectomy (PSN) (involving total removal of the presacral nerves) and uterine nerve ablation (UNA) (involving transection of the uterosacral ligaments at their insertion into the cervix by open surgical operation).

2.2 Outline of the procedure

2.2.1 LUNA is normally performed under general anaesthesia. The peritoneal cavity is insufflated with carbon dioxide gas and small incisions are made in the abdomen to provide access for the laparoscope and surgical instruments. The uterus is anteverted with a uterine manipulator and the uterosacral ligaments are identified and transected close to their attachment to the cervix. One or both of the ligaments may be transected. A small portion of ligament is sometimes resected and

examined histologically to confirm the presence of nerve fibres. LUNA is often carried out during the course of other surgical treatment for endometriosis.

2.3 Efficacy

2.3.1 A systematic review of nine randomised controlled trials (RCTs) including 528 women treated with LUNA reported that there were no significant differences in pain relief between women treated with LUNA and women treated with diagnostic laparoscopy or conservative surgery alone at 6 months (odds ratio [OR] 1.15, 95% confidence interval [CI] 0.66 to 1.99), 12 months (OR 1.20, 95% CI 0.72 to 1.99) or 36 months (OR 0.84, 95% CI 0.39 to 1.80). In an RCT of 68 women with primary dysmenorrhoea, the OR for pain relief at 6 and 12 months was 1.43 (95% CI 0.56 to 3.69) and 6.12 (95% CI 1.78 to 21.03) respectively, in favour of LUNA. For women with secondary dysmenorrhoea, the OR for pain relief at 6 and 12 months was 1.03 (95% CI 0.52 to 2.02) and 0.77 (95% CI 0.43 to 1.39) respectively.

2.3.2 One RCT included in the systematic review compared laparoscopic PSN (LPSN) with LUNA. It reported that women treated with LPSN had significantly less pain at 12 months than women treated with LUNA (OR 0.10, 95% CI 0.03 to 0.32). A non-randomised comparative study reported that 91% (21/23) of women treated with LPSN had relief of dysmenorrhoea at 6 months, compared with 76% (25/33) of women treated with LUNA (p value not stated). One RCT comparing LUNA with vaginal uterosacral ligament resection reported similar proportions of women with no chronic pelvic pain, or pain not requiring treatment at 12 months (75% [27/36] and 74% [28/38] respectively, p = 0.90).

2.3.3 In one case series of 85 women, 'excellent' or 'satisfactory' improvement (not otherwise defined) was reported by 76% (38/50) of women with dysmenorrhoea and 80% (41/51) of women with deep dyspareunia after a mean follow-up of 19 months.

2.3.4 One case series of 52 women reported an overall success rate (defined as a response of pain relief of 8 or higher on a scale of 0–10, no need for oral analgesics and the absence of pelvic pathology on pelvic

examination) of 72% at 1 year, 58% at 2 years, 51% at 3 years and 40% at 4 years. For more details, refer to the 'Sources of evidence' section.

2.3.5 The Specialist Advisers considered that, while the procedure could be considered established practice, there is uncertainty about its efficacy.

2.4 Safety

2.4.1 Few complications were reported. In one RCT and one non-randomised comparative study, more complications were reported for LPSN than for LUNA. Constipation was reported in 0% (0/35) and 12% (4/34) of women treated with LUNA compared with 94% (31/33) and 21% (5/24) of women treated with LPSN (follow-up not reported). Urinary urgency and postoperative bleeding were also reported in the LPSN groups but not the LUNA groups.

2.4.2 Two case reports described a total of five women developing uterine prolapse after having LUNA; three women were young, nulliparous soldiers undergoing parachute training and the other two women had a history of vaginal childbirth. For more details, refer to the 'Sources of evidence' section.

2.4.3 The Specialist Advisers stated that potential adverse events include vascular, bowel or ureter injury, bleeding, the need for conversion to open surgery, and prolapse.

3 Further information

3.1 NICE has issued interventional procedures guidance on laparoscopic helium plasma coagulation for the treatment of endometriosis.

Andrew Dillon
Chief Executive
October 2007

Sources of evidence

The evidence considered by the Interventional Procedures Advisory Committee is described in the following document.

'Interventional procedure overview of laparoscopic uterine nerve ablation (LUNA) for chronic pelvic pain', February 2007.

Information for patients

NICE has produced information describing its guidance on this procedure for patients and their carers ('Understanding NICE guidance'). It explains the nature of the procedure and the decision made, and has been written with patient consent in mind.

4 About this guidance

NICE interventional procedure guidance makes recommendations on the safety and efficacy of the procedure. It does not cover whether or not the NHS should fund a procedure. Funding decisions are taken by local NHS bodies after considering the clinical effectiveness of the procedure and whether it represents value for money for the NHS. It is for healthcare professionals and people using the NHS in England, Wales, Scotland and Northern Ireland, and is endorsed by Healthcare Improvement Scotland for implementation by NHSScotland.

This guidance was developed using the NICE interventional procedure guidance process.

We have produced a summary of this guidance for patients and carers. Information about the evidence it is based on is also available.

Changes since publication

14 January 2012: minor maintenance.

Your responsibility

This guidance represents the views of NICE and was arrived at after careful consideration of the available evidence. Healthcare professionals are expected to take it fully into

account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of healthcare professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.