

Laparoscopic helium plasma coagulation for the treatment of endometriosis

Interventional procedures guidance

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[nice.org.uk/guidance/ipg171](https://www.nice.org.uk/guidance/ipg171)

Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

This guidance replaces IPG54.

1 Guidance

This guidance replaces the previous guidance on laparoscopic helium plasma coagulation for the treatment of endometriosis (Interventional Procedures Guidance no. 54, March 2004).

- 1.1 Current evidence suggests there are no major safety concerns associated with laparoscopic helium plasma coagulation for the treatment of endometriosis. However, evidence on efficacy does not appear adequate for this procedure to be used without special arrangements for consent and for audit or research.
- 1.2 Clinicians wishing to undertake laparoscopic helium plasma coagulation for the treatment of endometriosis should take the following actions.
- Inform the clinical governance leads in their Trusts.
 - Ensure that patients understand the uncertainty about the efficacy of the procedure and provide them with clear written information. In addition, use of the Institute's [information for the public](#) is recommended.
 - Audit and review clinical outcomes of all women undergoing laparoscopic helium plasma coagulation for the treatment of endometriosis.
- 1.3 Clinicians undertaking this procedure should have adequate training before performing the technique. The [British Society for Gynaecological Endoscopy](#) has produced standards for training.
- 1.4 Publication of randomised controlled trials on the efficacy of this procedure will be useful. The Institute may review the procedure upon publication of further evidence.

2 The procedure

2.1 Indications

- 2.1.1 Women with endometriosis have deposits of endometrial tissue (which is normally confined to the lining of the uterus) outside the uterus. Many women are asymptomatic, but others may experience pelvic pain, dyspareunia, dysmenorrhoea or infertility.

2.1.2 In most women, endometriosis can be treated with analgesics and hormones. Women whose endometriosis does not respond may be offered minimally invasive surgery to excise or destroy the endometrial deposits, most commonly by electrocautery or laser through a laparoscope. Women with very severe symptoms may be offered more radical treatment involving hysterectomy and removal of the ovaries.

2.2 *Outline of the procedure*

2.2.1 Laparoscopic helium plasma coagulation of endometriosis is a minimally invasive procedure used to vaporise endometrial deposits. A laparoscope is used to direct an ionised beam of helium gas at endometrial deposits to destroy them.

2.3 *Efficacy*

2.3.1 The method of evaluating symptoms following the procedure varied between studies, making comparison difficult. Across three series, symptomatic relief was achieved in 49% (39/79), 72% (179/250) and 81% (17/21) of women at 3 months' follow-up. In another case series, continuing symptoms were reported in 38% (5/13) of women at 14 months' follow-up.

2.3.2 Only one case series of 50 women, which included 9 women who presented with infertility and 15 who were both symptomatic and infertile, reported fertility outcomes: 44% (4/9) of the solely infertile group and 20% (3/15) of the women who were also symptomatic had conceived within 6 months of the procedure.

2.3.3 In one case series, none of the 250 procedures had to be converted to open surgery, and there were no re-admissions after 3 months, whereas a repeat procedure was required in 16% (5/31) of women in another case series, in which the mean period to return to normal daily activities was 12 days. There was no long-term follow-up of women beyond 6 months in published case series. For more details, refer to the 'Sources of evidence' section.

2.3.4 The Specialist Advisors noted that the procedure may cause less lateral burning than the diathermy technique, and may allow women to be treated on a day-case basis.

2.4 Safety

- 2.4.1 Three series recorded no side effects or complications related to the procedure in a total of 130 women. After 3 months' follow-up of 250 cases, one case series reported no major postoperative complications and no surgical complications. For more details, refer to the 'Sources of evidence' section.
- 2.4.2 The Specialist Advisors noted that theoretical adverse events include damage to normal tissue (as seen when other energy sources are used), bowel injury, haemorrhage, infection and, potentially, helium embolisation.

Andrew Dillon
Chief Executive
May 2006

3 Further information

Sources of evidence

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

['Interventional procedure overview of laparoscopic helium plasma coagulation of endometriosis'](#), November 2005.

Information for patients

NICE has produced [information on this procedure for patients and carers](#). It explains the nature of the procedure and the guidance issued by NICE, and has been written with patient consent in mind.

4 Changes since publication

As part of the NICE's work programme, the current guidance was considered for review in June 2009 but did not meet the review criteria as set out in the IP process guide. This guidance therefore remains current.

19 January 2012: minor maintenance.

5 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.

It updates and replaces NICE interventional procedure guidance 54.

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

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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.