

# Laparoscopic helium plasma coagulation for the treatment of endometriosis

This document replaces previous guidance on laparoscopic helium plasma coagulation of endometriosis (*NICE interventional procedure guidance no. 54*)

## 1 Guidance

- 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 (available from [www.nice.org.uk/IPG171publicinfo](http://www.nice.org.uk/IPG171publicinfo)).
  - 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 ([www.bsge.net](http://www.bsge.net)).
- 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

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### This guidance is written in the following context

This guidance represents the view of the Institute which 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.

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This guidance is endorsed by NHS QIS for implementation by NHSScotland.

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

## Information for the public

NICE has produced information describing its guidance on this procedure for patients, carers and those with a wider interest in healthcare. It explains the nature of the procedure and the decision made, and has been written with patient consent in mind. This information is available from [www.nice.org.uk/IPG171publicinfo](http://www.nice.org.uk/IPG171publicinfo)

## 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.

Available from: [www.nice.org.uk/ip167overview](http://www.nice.org.uk/ip167overview)

## Ordering information

Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N1033. *Information for the public* can be obtained by quoting reference number N1034.

The distribution list for this guidance is available at [www.nice.org.uk/IPG171distributionlist](http://www.nice.org.uk/IPG171distributionlist)

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