

# NATIONAL INSTITUTE FOR CLINICAL EXCELLENCE

## INTERVENTIONAL PROCEDURES PROGRAMME

### Interventional procedures overview of photodynamic endometrial ablation

#### ***Introduction***

This overview has been prepared to assist members of the Interventional Procedures Advisory Committee advise on the safety and efficacy of an interventional procedure previously reviewed by SERNIP. It is based on a rapid survey of published literature, review of the procedure by Specialist Advisors and review of the contents of the SERNIP file. It should not be regarded as a definitive assessment of the procedure.

#### ***Date prepared***

This overview was prepared in November 2002.

#### ***Procedure names***

- Photodynamic endometrial ablation.

#### ***Specialty societies***

- *Royal College of Obstetricians and Gynaecologists.*

#### ***Description***

##### **Indications**

Heavy menstrual periods, also known as menorrhagia.

Menorrhagia is a very common problem. No routine data was found on the numbers of gynaecological procedures carried out each year in the UK by indication. In 2000/2001 about 45,000 hysterectomies and 17,000 therapeutic endoscopic uterine procedures were carried out in England (Hospital Episode Statistics; ungrossed for missing data; Department of Health). About half of these are likely to be for heavy menstrual bleeding.<sup>1</sup>

##### **Summary of procedure**

Hysterectomy has been the traditional treatment for women with menorrhagia that has not responded to medical treatment. Minimally invasive procedures to destroy the lining of the uterus (endometrium) may reduce complications and recovery time compared with hysterectomy. These include hysteroscopic procedures, which involve destroying the endometrium with lasers, radiofrequency waves or electrocautery, and non-hysteroscopic procedures, which involve destroying the endometrium using heated saline, a heated balloon, lasers, or microwaves. Non-hysteroscopic procedures can often be carried out on a day admission under local anaesthetic.

Photodynamic endometrial ablation is a new non-hysteroscopic procedure that involves the injection of a photosensitive chemical into the uterine cavity through a hysterosalpingography catheter. Laser is transmitted from a probe inserted through

the cervix. This activates the photosensitive chemical, which destroys the endometrium.

### ***Literature review***

#### **Appraisal criteria**

Studies of photodynamic endometrial ablation in women with menorrhagia were included.

#### **List of studies found**

No controlled studies were found.

One case series was found.<sup>1</sup>

**Table 1 Summary of key efficacy and safety findings**

| <b>Study details</b>   | <b>Key efficacy findings</b>  | <b>Key safety findings</b>       | <b>Key reliability and validity issues</b>  |
|--|---|----------------------------------|---|
| <p>Wyss P<sup>1</sup></p> <p>Case series</p> <p>Zurich, Switzerland</p> <p>Date not stated (published 1998)</p> <p>n = 2 women with menorrhagia<br/>n = 1 woman with prolonged postmenopausal bleeding</p> <p>Mean follow up: 6 months</p> | <p>'Reduction' in bleeding reported by both women with menorrhagia</p> <p>Post menopausal woman had hysterectomy 5 months later</p> <p>No general or local anaesthesia required</p> | <p>No complications reported</p> | <p>Uncontrolled case series.</p> <p>No assessment of pain or discomfort during operation.</p> |

### **Validity and generalisability of the studies**

- Only one very small case series was found. This provides very limited information on safety and efficacy.

### ***Bazian comments***

- Several studies were found of photodynamic endometrial ablation in animals.

### ***Specialist advisors' opinions***

- Specialist advice was sought from the *Royal College of Obstetricians and Gynaecologists*.
- Photodynamic endometrial resection is experimental and not yet ready for clinical use. The photosensitive chemical used may cause skin photosensitivity.

### ***Issues for consideration by IPAC***

- None other than those discussed above.

## **References**

1. Wyss P, Fehr M, Van den Bergh H, Haller U. Feasibility of photodynamic endometrial ablation without anesthesia. *Int J Gynecol Obstet* 1998; 60: 287–88.

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