

Complete cytoreduction for pseudomyxoma peritonei (Sugarbaker technique)

1 Guidance

- 1.1 Current evidence on the safety and efficacy of complete cytoreduction for pseudomyxoma peritonei does not appear adequate for this procedure to be used in the NHS outside centres funded by the National Specialist Commissioning Advisory Group (NSCAG).
- 1.2 Clinicians wishing to undertake complete cytoreduction for pseudomyxoma peritonei should take the following action.
 - Ensure that patients understand the uncertainty about the procedure's safety and efficacy and provide them with clear written information. Use of the Institute's *Information for the Public* is recommended.
 - Audit and review clinical outcomes of all patients having complete cytoreduction for pseudomyxoma peritonei.
- 1.3 Publication of safety and efficacy outcomes will be useful in reducing the current uncertainty. The Institute may review the procedure upon publication of further evidence.
- 1.4 These recommendations apply only to the use of this technique to treat pseudomyxoma peritonei. The Institute will consider complete cytoreduction for peritoneal carcinomatosis separately.

2 The procedure

2.1 Indications

- 2.1.1 Pseudomyxoma peritonei is a rare, borderline malignant, slowly progressing tumour. It arises from the appendix or bowel and spreads throughout the peritoneal cavity, producing a large amount of mucus. Most patients will develop symptoms due to the bulk of the tumour. Most patients will eventually die of this condition, but they often survive for several years.
- 2.1.2 Standard treatment for pseudomyxoma peritonei is surgical debulking, in which the surgeon attempts to remove as much tumour as possible. Chemotherapy is also used. Recurrence is common, and therefore repeated debulking operations may be needed.
- 2.1.3 Patients with pseudomyxoma peritonei may be treated by 'watchful waiting', using surgery only when unacceptable symptoms or life-threatening complications, such as intestinal obstruction, arise.

2.2 Outline of the procedure

- 2.2.1 The Sugarbaker technique combines complete surgical tumour removal (complete cytoreduction) with intraoperative heated chemotherapy, and is followed by postoperative intraperitoneal chemotherapy. The operation takes around 10 hours and includes:
 - removal of the right hemicolon, spleen, gallbladder, greater omentum and lesser omentum

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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. Health professionals are expected to take it fully into account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of health professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

- stripping of the peritoneum from the pelvis and diaphragm
- stripping of the tumour from the surface of the liver
- removal of the uterus and ovaries in women
- removal of the rectum in some cases.

2.3 Efficacy

2.3.1 No controlled studies were found. The studies were of poor quality. One study of 385 patients showed 5-year survival to be 86% for those with less malignant pathology (adenomucinosis) and 50% for those with more malignant pathology (mucinous adenocarcinoma). However, not all patients in this study were followed up for 5 years, and it is not clear how survival was calculated. Another study showed overall 5-year survival to be around 74% in 98 out of 321 patients who underwent repeat cytoreductive surgery. For more details, refer to the Sources of evidence (see below).

2.3.2 The Specialist Advisors commented that there is international controversy about the effectiveness of this procedure, given the slow natural history of pseudomyxoma peritonei. One Advisor noted that uncertainty about efficacy emanates from the difficulty in accurately diagnosing pseudomyxoma peritonei preoperatively.

2.4 Safety

2.4.1 In a study of 46 patients the main complications included: prolonged gastric paresis (almost all patients); neutropenia (49%); re-operation for postoperative complications (24%); stomach or bowel perforation (22%); enteric fistula (13%); and peripheral pressure neuropathy (11%). Most studies, however, were of poor quality with

regard to safety outcomes. For more details, refer to the Sources of evidence (see below).

2.4.2 The Specialist Advisors listed the potential complications as: death; major blood loss; respiratory infection; peritonitis; bowel perforation; obstruction; adhesions; wound dehiscence; and wound infection. One Advisor commented that such prolonged surgery increased the risk of morbidity and mortality.

2.5 Other comments

2.5.1 It was noted that the procedure has a considerable risk of serious side effects, and that efficacy is not clearly established.

2.5.2 The procedure needs to be evaluated in comparison with less radical surgery.

Andrew Dillon
Chief Executive
April 2004

Information for the Public

The Institute 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, in English and Welsh, from www.nice.org.uk/IPG056publicinfo.

Sources of evidence

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

Interventional procedure overview of complete cytoreduction (Sugarbaker technique) in patients with pseudomyxoma peritonei, October 2002.

Available from: www.nice.org.uk/IP079overview

Ordering information

Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N0539. *Information for the Public* can be obtained by quoting reference number N0540 for the English version and N0541 for a version in English and Welsh.

The distribution list for this guidance is available on the NICE website at URL www.nice.org.uk/IPG056distributionlist

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