

Partial left ventriculectomy (the Batista procedure)

Interventional procedures guidance

Published: 25 February 2004

www.nice.org.uk/guidance/ipg41

1 Guidance

- 1.1 Current evidence on the safety and efficacy of partial left ventriculectomy (PLV) 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 PLV should take the following action.
 - Inform the clinical governance leads in their Trusts.
 - 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 PLV. 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.
- 1.3 This is a radical treatment for very ill patients that should only be

considered in centres where alternative treatments for severe heart failure are available.

2 The procedure

2.1 Indications

- 2.1.1 PLV is used to treat patients with irreversible (end-stage) heart failure secondary to dilated disease, or Chagas' disease. It has also been used in some patients with ischaemic heart disease.
- 2.1.2 Surgical alternatives to PLV may include coronary artery bypass grafting (CABG), cardiac transplant and left ventricular assist devices (LVAD). Ventricular volume reduction procedures include mitral valve repair (mitralannuloplasty), endoventricular circular patch plasty and left ventricular aneurysmectomy. Medical therapy includes diuretics, vasodilator therapy, beta blockers and digoxin.

2.2 Outline of the procedure

- 2.2.1 Partial left ventriculectomy seeks to restore left ventricular function by reducing cardiac volume (and left ventricular wall tension) through the resection of the posterolateral wall of the left ventricle. It is often accompanied by valvuloplasty (or mitral annuloplasty) to prevent postoperative mitral regurgitation. Variations of the technique for PLV include lateral PLV, extended PLV and anterior PLV. The procedure is usually performed with the aid of cardiopulmonary bypass.
- 2.2.2 In lateral PLV, an incision is made at the apex of the left ventricle and extended towards the base. A wedge-shaped portion of the left ventricle is resected, leaving the papillary muscles intact where possible. Extended PLV additionally excises the papillary muscles and the mitral valve. In anterior PLV, the area between the left anterior descending artery and the attachment of the left anterolateral papillary muscle is resected and closed as in lateral PLV.

2.3 Efficacy

- 2.3.1 Studies reported 30-day survival rates of between 50% and 99%. In one non-randomised study, there was no difference in survival rates between patients undergoing this procedure and patients undergoing heart transplant at 1 year. In a case series of 62 patients, survival was 80% and 60%, and event-free survival was 49% and 26%, at 1 and 3 years, respectively, after surgery. The survival rate at 1 year was achieved with the frequent use of ventricular assist devices and transplantation as salvage therapy. For more information, refer to the 'Sources of evidence' section.
- 2.3.2 All the Specialist Advisors thought that efficacy, especially long-term efficacy, was uncertain. One Advisor commented that it is difficult to establish which patients would benefit from the procedure and that there is often no improvement in myocardial function.

2.4 Safety

- 2.4.1 As noted in Section 2.3.1, 30-day mortality ranged from 1% to 50%. However, it is unclear from the studies whether these deaths were the result of the procedure or were attributable to the underlying condition. Reported complications included congestive heart failure, bleeding, arrhythmias, renal failure, respiratory failure and infection. For more information, refer to the 'Sources of evidence' section.
- 2.4.2 The Specialist Advisors were concerned about the high (30-day) mortality rate associated with this procedure. One Advisor listed late complications as arrhythmias, mitral regurgitation, and progressive dilation of the left ventricle. The same Advisor considered the main disadvantage of the procedure to be the need for resection of viable myocardium.

2.5 Other comments

- 2.5.1 The evidence for this procedure is difficult to interpret because of:

- inconsistencies in patient selection
- the variable nature of the surgery performed
- inadequate information about duration and quality of life after the operation.

Andrew Dillon
Chief Executive
February 2004

3 Further information

Sources of evidence

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

'Interventional procedures overview for partial left ventriculectomy', October 2002.

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 NICE's work programme, the current guidance was considered for review but did not meet the review criteria as set out in the IP process guide. The guidance here therefore remains current.

30 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.

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

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.

Copyright

© National Institute for Health and Clinical Excellence 2004. All rights reserved. NICE copyright material can be downloaded for private research and study, and may be reproduced for educational and not-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the written permission of NICE.

Contact NICE

National Institute for Health and Clinical Excellence
Level 1A, City Tower, Piccadilly Plaza, Manchester M1 4BT

www.nice.org.uk
nice@nice.org.uk
0845 033 7780

Endorsing organisation

This guidance has been endorsed by [Healthcare Improvement Scotland](#).