



Extended Research Article

Minimally invasive thoracoscopically-guided right minithoracotomy versus conventional sternotomy for mitral valve repair: the UK Mini Mitral multicentre RCT

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Plain language summary

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Plain language summary

Mitral valve regurgitation is a disease where one of the valves in the heart becomes leaky, allowing blood to flow the wrong way. This usually happens with age as the valve becomes floppy, or the muscles around it are weakened. Patients usually become short of breath. When it becomes severe, the best treatment is heart surgery to repair the valve. During surgery, the heart valve can be accessed by cutting through the breastbone (sternotomy) or using keyhole surgery (mini thoracotomy).

The UK Mini Mitral Trial compared these two types of surgery. Over 300 UK patients were split into two groups, with each group receiving one type of surgery.

Both types of surgery led to patients getting better, with 96% having their valve successfully repaired. After surgery, patients in the keyhole group were discharged from hospital a day earlier than those in the Sternotomy group.

To measure recovery, patients completed a questionnaire and wore an activity monitor. Those in the keyhole group did more vigorous exercise early after surgery, such as brisk walking or swimming, and had better sleep than the Sternotomy group. By 12 weeks, both groups had an equally improved activity levels and physical function than before the surgery.

Heart scans at 3 months and 1 year showed that almost all patients in both groups had mild or no mitral regurgitation. This tells us that both operations continued to be successful for patients, and their regurgitation has been fixed. Complications were low among both groups. Patients in the keyhole group were less likely to experience a complication early after surgery, and at 1 year after surgery, the results were similar. Mini was on average more costly but had slightly better quality of life over 1 year than sternotomy.

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This article

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