## 当科で行なっている右腋窩小切開手術が、ヨーロッパ胸部外科学会のトピックとして取り上げられました



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## In this issue

- 2 Jeopardy winners head to STS 2020
- 4 EACTS Training Village
- 9 Inside Lisbon





## Closure of subpulmonary ventricular septal defect via right thoracotomy

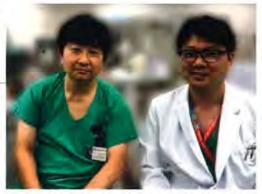
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minimally invasive approach by means of a right thoracotomy could be beneficial in terms of patients' quality of life (QOL). The purpose of this study is 1) to see the surgical outcome of congenital heart surgery performed by right thoracotomy, and 2) to show a surgical video of subpulmonary ventricular septal defect (VSD) closure via right thoracotomy.

Retrospective study was performed in 1,162 patients who underwent simple congenital heart surgery from 1991 to 2018. Of these patients, 101 (8.7%) patients had a right thoracotomy approach. Diagnosis included atrial septal defect in 90 patients, VSD in 8 patients, partial atrioventricular septal defect in 1 patient, mitral regurgitation in 1 patient, and cor triatrium in 1 patient.

Our operative technique is as follows: 1. Vertical right sub axiallary skin incision; 2. Enter through the 3rd or 4th intercostal space; 3. Use of the wound retractor to protect the skin; 4. Perfusion and drainage from chest (central cannulation). Consider femoral cannulation if patients weighing more than 30kg; 5. A catheter is placed at intercostal space at the end of operation for administration of pain medication.

There were no deaths, nor were there any cardiopulmonary bypass (CPB)-related complications. No patients required conversion



Shingo Kasahara (left) and Yasuhiro Kotani

to median sternotomy, and there were no blood transfusions required associated with the thoracotomy.

We present a case of four-year-old, girl with subpulmonary VSD. Briefly, the chest was entered via right 4th intercostal space (Figure 1). After establishment of CPB, the ascending aorta was cross-clamped, followed by administration of cardioplegia. The ascending aorta was opened at 1cm above the ST-junction. The VSD was confirmed just below the right coronary cusp (Figure 2) and then closed with two pairs of 5-0 sutures. Figure 3 shows the wound which is hidden under the arm. Technical tips and pitfalls will be shown in the presentation.

In conclusion, minimally invasive approach is now



Figure 1

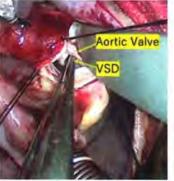


Figure 2



Figure 3

proposed as the first choice of surgery in most of simple congenital heart defects. Our result showed that right thoracotomy approach can be performed without having a longer myocardial ischemic time compared to median sternotomy. Extended anatomic indication, such as subpulmonary VSD should be considered, if surgery can be performed without any complications.