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**CARDIAC RESYNCHRONISATION THERAPY EFFECTS  
COMPARE OF THE SURGERY EPICARDIAL LEAD  
VERSUS CORONARY SINUS LEAD PLACEMENT**

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Zhang Haibo, Meng Xu, Zhang Ye, Zhou Yujie, Jiang Tengyong, Zhao Yingxin,  
Meng Xu. *Beijing Anzhen Hospital, Capital Medical University*

**Objectives** Cardiac resynchronisation therapy (CRT) with biventricular pacing has demonstrated cardiac function improvement. Two strategies (coronary sinus vs epicardial) for left ventricular (LV) pacing were compared.

**Methods** 33 patients with ejection fraction <35%, widen QRS ( $168\pm 19$  ms) and heart failure were enrolled. For left ventricular stimulation coronary sinus (CS) leads were placed in 19 pts. In 14 patients epicardial (Epi) leads were implanted with video-assisted thoracoscopy.

**Results** All the Epi-lead cases and 13 cases in CS-lead group received the LV lead implantation at the latest activated site examined by Tissue Doppler Imaging. For the entire series QRS-duration decreased from  $168\pm 19$  to  $128\pm 14$  ms ( $P<0.05$ ) without difference between groups. The Epi-lead group got better left ventricle resynchronisation effect than the coronary sinus lead group. There was no hospital mortality in the entire series. The LV lead implantation procedure time was  $53.4\pm 16.3$  min for Epi-lead group and  $136\pm 35.1$  min for the CS-lead group ( $p<0.05$ ). During the follow up there was clinical cardiac function improvement (15/19 in CS-lead group vs 13/14 in Epi-lead group,  $p>0.05$ ). Threshold of the CS-leads increased significantly compared to Epi-leads (15.7 month control:  $2.3\pm 1.6$  V vs  $1.02\pm 0.4$  V/0.5 ms), which had no increase ( $p<0.05$ ). One case died in the CS-lead group and none died in the Epi-lead group during the follow up. One patient in Epi-lead group and two cases in CS-lead group re-admitted because of the serious heart failure.

**Conclusions** Surgical Epi-lead placement for the resynchronisation therapy is a safe and reliable technique and should be considered as an equal alternative.