山东大学学报(医学版) 2010, 48(7) 77-82 DOI: ISSN: 1671-7554 CN: 37-1390/R

论文

双源螺旋CT在小儿先天性心脏病诊断中的应用价值

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摘要：

目的 探讨双源螺旋 CT(DSCT) 对小儿先天性心脏病 (简称先心病)的诊断价值。方法 回顾分析38例先心病患儿DSCT心脏大血管造影资料，包括主动脉缩窄14例，法洛四联症9例，肺静脉异位引流3例，右室双出口3例，动脉导管未闭2例，肺动脉闭锁伴室间隔缺损、肺动脉起源异常伴动脉导管未闭、室间隔缺损伴主动脉弓畸形、肺动脉狭窄伴房间隔缺损、右旋心、单心室、冠状动脉起源异常各1例。其中男29例，女9例，37d～11岁，平均2.1岁。所有患儿在行DSCT检查前均行经胸超声心动图（TTE)检查，手术32例。并将DSCT检查结果与TTE及手术结果进行对比分析。结果 38例先心病患儿对对比剂均无不良反应。38例患儿中，共检出心内外畸形140处，其中DSCT共检出121处，TTE共检出127处。32例接受手术治疗的患儿，手术效果良好，无1例死亡。32例经手术证实的心内外结构异常共128处，DSCT与TTE的诊断准确率分别为85.94％和89.84％。其中，心脏部分畸形57处，DSCT检出率70.18％，TTE检出率100％，DSCT的检出率低于TTE（P<0.05）；心脏-大血管连接部分畸形20处，DSCT与TTE检出率均为100％；大血管部分畸形51处，DSCT检出率98.04％，TTE检出率74.51％，DSCT的检出率显著高于TTE(P<0.05)。结论 DSCT能够清晰显示心外大血管的病理解剖结构，可弥补TTE检查的不足，对先心病尤其是合并心外大血管畸形的诊断具有重要价值。

关键词： 先天性心脏病；心外血管畸形；体层摄影术，X线计算机；超声心动描记术

Clinical value of dual source spiral CT in the diagnosis of congenital heart disease in children

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Abstract:

Objective To determine the value of dual-source spiral CT (DSCT) in the diagnosis of congenital heart disease in children. Methods DSCT angiographic data of 38 patients（29 males and 9 female； age range， 37 days-11 years， and mean age, 2.1 years） with congenital heart disease were retrospectively analyzed， including 14 cases of coarctation of the aorta， 9 cases of tetralogy of Fallot， 3 cases of anomalous pulmonary venous connection， 3 cases of double outlet of right ventricle， 2 cases of patent ductus arteriosus and 1 each case of pulmonary atresia with ventricular septal defect, anomalous origin of pulmonary artery with patent ductus arteriosus, ventricular septal defect with anomalousaortic arch, pulmonary stenosis with atrial septal defect, dextrocardia, single ventricle and congenital malformations of coronary arteries. Transthoracic echocardiograms (TTE) were performed in all of the patients and 32 underwent surgical operation. The results of DSCT were compared with those of TTE and surgery. Results In the process of CT scanning no adverse reaction to the contrast agent occurred. Among the 38 patients DSCT revealed 121 anomalies in all the 140 ones and TTE 127. Surgery was effective with no deaths. In the 32 patients there were 128 deformities confirmed by surgery. The diagnosis accuracies of DSCT and TTE were 85.94％ and 89.84％ respectively. There were 57 intracardiac deformities 40(70.18％) detected by DSCT and 57 (100％) by TTE. The diagnosis accuracy of DSCT was inferior to that of TTE(P<0.05). There were 20 heart-vessel conjunction deformities any of which was detected by DSCT and TTE. There were 51 great vessel deformities 50(98.04％) detected by DSCT and 38(74.51％) by TTE. The diagnosis accuracy of DSCT was superior to that of TTE(P<0.05). Conclusion DSCT can clearly reveal the pathological morphology of extracardiac vascular abnormalities primely compensating for the shortage of TTE. Therefore DSCT has an important value in the diagnosis of congenital heart disease especially in that

combined with extracardial vascular anomalies.

Keywords: Congenital heart disease； Extracardiac vascular abnormalities； Tomography X-ray computed； Echocardiography

收稿日期 2010-04-09 修回日期 网络版发布日期

DOI:

基金项目:

山东省科技攻关课题资助项目（2006GG3202029）

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