

## 64 切電腦斷層於冠狀動脈異常的診斷

### Diagnosis of Anomalous Coronary Arteries in

### 64-MDCT

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#### 摘要

冠狀動脈異常可分為良性及惡性（致命）兩類。以往這類異常大都由心導管診斷得知。有別於侵入性的心導管檢查，新進的多切片電腦斷層檢查可提供非侵入性及高準確度的冠狀動脈影像。本項檢查可利用三維影像顯示異常冠狀動脈的開口、走向及解剖位置。我們從 2006 年 6 月到 2007 年 6 月收集了 540 位受檢者接受 64 切電腦斷層冠狀動脈血管檢查的資料。這些受檢者包括接受健康檢查者及有心臟疾病病史的病人。結果診斷出有 81 位受檢者有冠狀動脈異常。其中 3 位沒有左側冠狀動脈、1 位左側冠狀動脈屬高位開口、8 位右側冠狀動脈開口異常，開口起源於左側冠狀竇，其它 69 位冠狀動脈有心肌橋異常。雖然惡性的冠狀動脈異常很少導致死亡，但這項診斷對於心臟科醫師進行心導管檢查及外科醫師實施手術有極大的貢獻，所以診斷出冠狀動脈異常是很重要的。利用 64 切電腦斷層的容積重建(volume rendering, VR)及最大密度投影(Maximum Intensity Projection; MIP)可清楚顯現冠狀動脈異常。與其他檢查方式相比，多切片電腦斷層是目前信賴度很高的診斷方式之一。

#### Abstract

Anomalous coronary arteries can be benign or life threatening. Novel advances on multi-detector computed tomography (MDCT) provide a noninvasive technique and offer an accurate diagnostic modality to visualize the origin and course of anomalous coronary arteries by a 3D display of anatomy. Thus we demonstrated anomalies of coronary arteries shown by 64-MDCT in our institution. 540 subjects referred to our Hospital for MDCT coronary angiography were included in this study. These subjects were between the ages of 12 and 90 years (mean  $59 \pm 12.6$  years) including 297 (55%) male and 243 (45%) female. Post-processing techniques such as volume rendering (VR) and maximum intensity projection (MIP) were applied to demonstrate the coronary artery anatomy. Both a radiologist and a cardiologist evaluated all examinations. The incidence of anomalous anatomical origin and course of the coronary arteries in our study group was 15% (n=81).

The anomalies found in our study are absence of left main coronary artery (n=3, 0.5%), high take-off origin of left main coronary artery (n=1, 0.2%), ectopic origin of right coronary artery from the left coronary sinus (n=8, 1.5%), and myocardial bridging (n=68, 12.6%). MDCT with VR and MIP techniques is practical for assessment of anomalous coronary arteries and helpful for radiologist, cardiologist and surgeon