要望演題 | 画像診断の進歩
要望演題2（YB02）
画像診断の進歩
座長:
早渕 康信（徳島大学大学院医療薬学研究部 小児科学）
片山 博視（大阪医科大学附属病院 小児科）
Wed. Jul 6, 2016 4:10 PM - 5:10 PM 第D会場 (オーロラ イースト)
YB02-01～YB02-06

4:10 PM - 5:10 PM
[YB02-01]磁気共鳴 feature tracking strainを用いたフォンタン術後患者の心機能評価
○稲毛 章郎1, 水野 直和2, 松田 純3, 齋藤 美香1, 浜道 裕二1, 石井 卓1, 中本 祐樹1, 上田 知実1, 矢崎 諭1, 嘉川 忠博1
(1.榊原記念病院 小児循環器科, 2.榊原記念病院 放射線科)
Keywords:Fontan palliation、cardiac magnetic resonance、feature tracking strain

Objective: To investigated into cine-based feature tracking strain (FTS) in single ventricle subjects after Fontan palliation undergoing cardiac magnetic resonance (CMR).

Methods: 18 Fontan subjects (mean age 17.6+/-.9.2 years, post Fontan period 14.2+/-.8.2 years, 13/18 morphologic right ventricle, 5/18 morphologic left ventricle) underwent a CMR study. Single ventricular end-diastolic and -systolic volumes (SVEDV and SVESV), stroke volume (SV), and ejection fraction (EF) were measured as conventional function parameters. Global longitudinal and circumferential strain/strain rate (GLS/GLSR and GCS/GCSR), and radial strain/SR are calculated using FTS. Anterior to posterior wall motion delay (<130ms;APWMD) analysis was performed on the short-axis view at the basal level, and bilateral wall motion delay (<90ms;BLWMD) on the 4-chamber view at the basal and mid levels.

Results: Basal GCS/GCSR were lower than it at the mid (p=0.02 and 0.02) and apical (p=0.001 and 0.003) levels. There were correlations between GLS/GLSR and GCS/GCSR, and SVEDV (r=0.51 to 0.73). At the mid and apical levels, there were correlations between GCS/GCSR and SVESV, and EF (r=0.66 to 0.85 and r=0.52 to 0.79). There was also correlation between GLSR and SV (r=0.73). BLWMD was found for 12 cases (67%) at the basal and 10 cases (56%) at mid levels, and APWMD for 4 cases (22%) at the basal level.

Conclusions: Basal ventricular dysfunction suggested by low GCS/GCSR and BLWMD. Analysis of regional strain/SR may helpful in understanding myocardial mechanics in the single ventricle in further studies.