|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | All (n=40) | Patients (n=20) | Controls (n=20) | *p*-value |
| Age *years* | 13.0±4.4 | 12.7±4.4 | 13.2±4.6 | 0.7 |
| Sex *female* | 20 (50) | 10 (50.0) | 10 (50) | 1.0 |
| Height *cm* | 153.7±20.9 | 150.8±19.7 | 156.7± 22.1 | 0.3 |
| Weight *kg* | 50.7±21.8 | 48.6±19.3 | 52.8±24.4 | 0.7 |
| Total physical activity *hours/week* (*n*=36) | 4.4±3.7 | 3.0±2.1 | 5.9±4.4 | **0.002** |
| Sports in free time (n=38) *yes* | 26 (68) | 9 (50) | 17 (85) | **0.02** |
| Growth pain legs *yes* | 18 (47) | 9 (50) | 9 (45) | 0.8 |

**Supplementary Table S1.** Demographic characteristics of patients and controls.

Data are presented as the means with SD or numbers with percentages. Data on physical activity constitutes self-reported data. Bold numbers denote p-values <0.05.

**Supplementary Table S2.** Diagnosis and blood test data of patients.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | *n*(%) | Variable | *n* | | Mean (±SD) | | Reference values |
| **Diagnosis** |  | **Blood test results** | |  | |  |  |
| HLHS1  PA2  TA3  DILV4 | 6 (15)  6 (15)  4 (10)  3 (7.5) | Serum 25(OH) D6  GGT7 | 12  7  1  20 | | 57.8±7.2  40.4±4.3  15.0  0.87±0.5 | | >50 *nmol/L\**  <50 *nmol/L\*\**  <25 *nmol/L\*\*\**  <0.6µ*kat/L* |
| DORV5 | 1 (2.5) | pro-BNP8 | 20 | | 79.7±40.3 | | <240 *ng/L* |
| Systemic ventricle *left* | 13 (65) |  |  | |  | |  |

Data are presented as the means with standard deviations or numbers with percentages. 1 HLHS, hypoplastic left heart syndrome; 2 PA, pulmonary atresia; 3 TA, tricuspid atresia, 4 DILV, double inlet left ventricle; 5 DORV, double outlet right ventricle; 6 25(OH) D, 25-hydroxy-vitamin D; 7 GGT, gamma-glutamyltransferase; 8 pro-BNP, B-type natriuretic protein. \*sufficient level, \*\* insufficiency, \*\*\*deficiency.

**Supplementary Table S3.** Tibia soft tissue measures assessed with peripheral quantitative computed tomography

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Unit | Patients (*n*=20) | Controls (*n*=20) | *p* | Effect size |
| **Age 6-19** |  |  |  |  |  |
| **Dimensions** |  |  |  |  |  |
| Fat CSA1 | *mm2* | 2062.9±747.5 | 2180.1±1064.0 | 0.8 | -0.13 |
| Muscle CSA1 | *mm2* | 4670.7±1684.6 | 5350.3±1852.2 | 0.2 | -0.38 |
| **Density** |  |  |  |  |  |
| Muscle Density | *mg/cm3* | 75.5±1.5 | 76.7±1.6 | 0.4 | -0.14 |
| **Age 6–12** |  | Patients (*n*=9) | Controls (*n*=9) |  |  |
| **Dimensions** |  |  |  |  |  |
| Fat CSA1 | *mm2* | 1689.9±678.6 | 1596.3±603.6 | 0.9 | 0.15 |
| Muscle CSA1 | *mm2* | 3115.4±1001.8 | 3630.6±856.3 | 0.6 | -0.23 |
| **Density** |  |  |  |  |  |
| Muscle Density | *mg/cm3* | 77.31±1.4 | 77.03±1.1 | 0.7 | 0.215 |
| **Age 13–19** |  | Patients (*n*=11) | Controls (*n*=11) |  |  |
| **Dimensions** |  |  |  |  |  |
| Fat CSA1 | *mm2* | 2368.1±682.3 | 2657.8±1140.9 | 0.3 | -0.31 |
| Muscle CSA1 | *mm2* | 5697.8±1417.8 | 6757.4±1044.9 | 0.06 | -0.85 |
| **Density** |  |  |  |  |  |
| Muscle Density | *mg/cm3* | 75.9±1.1.3 | 76.5±1.9 | 0.2 | -0.39 |

Data are presented as the means with standard deviations. Effect size, standardized mean difference Cohen’s D. 1 CSA, cross-sectional area.