Table 1**.** Clinical characteristics in patients on hemodialysis treatment and control group

|  |  |  |  |
| --- | --- | --- | --- |
|  | HD (n=20) | Control (n=20) | P |
|  | Mean±SD | Mean ±SD |  |
| Male/female | 10/10 | 13/7 | ns |
| Age | 12.85±4.19 | 10.62±3.58 | ns |
| BMI (kg/m2) | 1.17±0.32 | 1.16±0.31 | ns |
| HR (beats/min) | 103.3±9.83 | 77.4±12.12 | 0.000\* |
| SBP (mmHg) | 130.25±16.87 | 103-95±15.24 | 0.000\* |
| DBP (mmHg) | 90.1±15.10 | 67.60±10.51 | 0.000\* |

Data are presented as mean ± standard deviation.

SD-standard deviation,

HD- hemodialysis,

BMI- body mass index,

HR- Heart rate,

SBP- Sistolic blood pressure,

DBP- Diastolic blood pressure,

NS- not significant.

Tabela 2. Clinical characteristics and echocardiographic measurements in patients on hemodialysis treatment and control group

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | HD | Control | | P | |
| IVC exp. (mm/m2) | 11.78±3.69 | 9.59±2.79 | 0.041\* | | |
| IVC insp. (mm/m2) | 5.81±3.23 | 3.65±2.09 | 0.017\* | | |
| IVC index % | 51.20±19.82 | 63.10±14.82 | 0.038\* | | |
| LVMg | 96.16±33.68 | 64.05±33.67 | 0.000\* | |
| LVMI (g/m².7) | 41.1±13.2 | 25.65±7.36 | 0.005\* | |
| LVDD (mm) | 40.45±4.49 | 36.95±6.64 | ns | |
| LVSD (mm) | 25.15±3.17 | 21.90±4.22 | 0.009\* | |
| IVSD (mm) | 8.04±1.68 | 6.47. ±1.06 | 0.000\* | |
| PWT (mm) | 8.10±1.77 | 6.34±1.01 | 0.001\* | |
| LA (mm) | 25.95±4.48 | 21.75±4.18 | 0.004\* | |
| EF (%) | 59.1±8.7 | 63.3±5.06 | ns | |
| FS (%) | 37±5 | 40±6 | ns | |
|  |  |  |  | |

Values are presented as mean values ± SD.

SD-standard deviation,

IVC-inferior vena cava

EF-Ejection fraction,

FS-Fractional shortening,

LVDD-Left Ventricular Diameter in Diastole,

IVSD-Interventricular Septum in Diastole,

PWT-Posterior Wall Thickness .

LVMI-left ventricular mass index,

NS-not significant

Tabela 3. Pulsed Doppler and tusse Doppler measurements in patients on hemodialysis treatment and control group

|  |  |  |  |
| --- | --- | --- | --- |
|  | HD  (N=20) | Control  (N=20) | p |
| S(cm/s) | 80.70±10.58 | 72.45±9.30 | 0.013\* |
| D(cm/s) | 81.00±12.87 | 68.50±13.19 | 0.004\* |
| S/D | 0.99±0.12 | 1.05±0.18 | 0.03\* |
| AR(cm/s) | 19.55±3.93 | 16.10±4.81 | 0.017\* |
| Peak E (cm/s) | 139.9±17.18 | 123.65±18.96 | 0.008\* |
| Peak A (cm/s) | 95.1±13.12 | 80.35±11.65 | ns |
| E/A ratio | 1.59±0.36 | 1.43±0.16 | 0.005\* |
| DT | 100.65±21.2 | 113.65±17.24 | 0.03\* |
| Sm (cm/s) | 14.58±1.79 | 13.96±17.6 | ns |
| Em (cm/s) | 16.15±2.38 | 16.91±3.14 | ns |
| Am (cm/s) | 13.02±2.16 | 13.47±2.85 | ns |
| Em/Am ratio | 1.21±0.29 | 1.25±0.10 | ns |
| E/Em ratio | 8.58±1.47 | 7.11±0.97 | 0.001\* |
| IVRT (ms) | 70.6±13.69 | 63.12±10.48 | 0.009\* |
| IVCT (ms) | 59.55±14.93 | 60.3±10.75 | ns |
| Tei Index (ms) | 0.47±0.07 | 0.42±0.04 | 0.000\* |
| ET (ms) | 259.2±58.28 | 272.15±41.0 | ns |

S (cm/s) systolic velocity,

D (cm/s) diastolic velocity,

AR(cm/s) pulmonary venous atrial reversa,

S/D ratio between the systolic and diastolic peak pulsed pulmonary venous Doppler velocities,

E-peak early-diastolic velocity,

A-peak late-diastolic velocity,

E/A ratio between the early and atrial peak pulsed mitral Doppler velocities,

Sm- Myocardial systolic wave ,

Em- peak early-diastolic mitral annular velocity,

Am- peak late-diastolic mitral annular velocity,

Em/Am- ratio of early diastolic myocardial velocity and late myocardial velocity,

E/Em- ratio of maximum blood flow velocity and maximum myocardial motion velocity,

Tei Index-(MPI-Myocardial Performance Index),

IVCT-isovolumic contraction time,

IVRT-isovolumic relaxation time,

ET- ejection time,

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