**AGE RELATED BURDEN OF SWALLOWING IN PATIENTS AFFECTED BY DUCHENNE MUSCULAR DYSTROPHY**

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**SUPPLEMENTAL MATERIAL**

**TABLE S1.** Characteristics of patients according to age group

|  |  |  |  |
| --- | --- | --- | --- |
|  | Age <30 (n=26) | Age ≥30 (n=22) | p |
| Age (years) | 25.4±3.7 | 35.5±4.9 | **<0.0001** |
| BMI (kg/m2) | 19.1±5.4 | 20.6±6.3 | 0.38 |
| FVC (% predicted) | 24.5±15.6 | 15.5±11.2 | **0.02** |
| MIP (cmH2O) | 20.6±12.9 | 12.8±9.8 | **0.02** |
| MEP (cmH2O) | 20.8±10.3 | 12.9±9.3 | **0.008** |
| SNIP (cmH2O) | 25.1±12.2 | 16.2±7.7 | **0.01** |
| PCF (L/min) | 152.3±60.3 | 114.3±57.8 | **0.03** |
|  |  |  |  |
| pH | 7.40±0.04 | 7.41±0.03 | 0.33 |
| PaO2 (mmHg) | 92.4±14.7 | 92.1±15.8 | 0.94 |
| PaCO2 (mmHg) | 42.5±8.0 | 42.8±6.9 | 0.91 |
| HCO3- (mmol/L) | 26.2±4.2 | 27.0±3.1 | 0.50 |
| BE (mmol/L) | 1.5 [0.2-4.7] | 2.8 [1.0-4.2] | 0.26 |
|  |  |  |  |
| Mean SpO2 (%) | 97.0±1.0 | 97.4±1.0 | 0.27 |
| ODI | 0.2 [0.0-1.0] | 0.0 [0.0-0.7] | 0.55 |
| Nadir (%) | 89.7±3.1 | 88.0±3.1 | 0.07 |
| T 90 (min) | 0.0 [0.0-0.8] | 0.0 [0.0-0.6] | 0.30 |
| mean nocturnal PtcCO2 (mmHg) | 37.5±6.6 | 38.7±5.8 | 0.53 |
| peak nocturnal PtcCO2 (mmHg) | 44.2±6.3 | 44.5±4.1 | 0.85 |
|  |  |  |  |
| TST (min) | 357.9±57.2 | 341.9±77.4 | 0.44 |
| SE (% time in bed) | 74.3±10.8 | 73.0±17.4 | 0.76 |
| SL (min) | 30.4±29.7 | 41.1±18.3 | 0.14 |
| WASO (min ) | 44.0±32.4 | 54.0±30.8 | 0.30 |
| N1 (% TST) | 13.5±6.7 | 17.0±9.9 | 0.17 |
| N2 (% TST) | 50.7±7.5 | 50.4±10.7 | 0.81 |
| N3 (% TST) | 18.1±7.4 | 16.9±8.4 | 0.61 |
| R (% TST) | 17.5±8.3 | 15.5±6.1 | 0.38 |
| Arousals (n/h) | 16.7±6.2 | 17.2±6.4 | 0.81 |
|  |  |  |  |
| Compass 31 | 11.8±9.6 | 13.2±11.7 | 0.65 |
| Gastrointestinal domain | 5.2±3.7 | 6.4±4.1 | 0.27 |

FVC, forced vital capacity; MIP, maximal inspiratory pressure; SNIP, sniff nasal pressure; MEP, maximal expiratory pressure; PCF, peak cough flow; PaO2, arterial partial pressure of oxygen; PaCO2, arterial partial pressure of CO2; HCO3−,bicarbonates; BE, base excess; SpO2, pulse oxygen saturation; ODI, number of oxygen desaturation ≥3% per hour of sleep; Nadir, lowest oxygen saturation; T90, time spent with oxygen saturation below 90%; PtcCO2, transcutaneous PCO2; TST, total sleep time; SE%, sleep efficiency; SL, sleep latency; WASO, wake after sleep onset; N1, NREM stage 1; N2, NREM stage 2; N3, NREM stage 3; R, REM stage.

**TABLE S2. Characteristics of patients using and not using NIV during meals**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Not using NIV  during meals  (n=22 patients) | Using NIV  during meals  (n=26 patients) | p |
| Age | 26.5±5.4 | 33.0±6.2 | **0.0005** |
| FVC (% predicted) | 29.1±15.2 | 13.0±8.4 | **<0.0001** |
| MIP (cmH2O) | 25.5±12.4 | 11.6±8.6 | **<0.0001** |
| MEP (cmH2O) | 20.2±10.6 | 10.7±7.5 | **0.0008** |
| SNIP (cmH2O) | 29.7±13.2 | 15.7±4.8 | **0.0001** |
| PCF (L/min) | 158.1±59.0 | 115.1±57.7 | **0.01** |
| Compass 31 | 8.5±.6 | 15.8±12.5 | **0.01** |
| Gastrointestinal domain | 5.4±3.4 | 6.2±4.3 | 0.49 |

FVC forced vital capacity; MIP, maximal inspiratory pressure; SNIP, sniff nasal pressure; MEP, maximal expiratory pressure; PCF, peak cough flow.

**TABLE S3.** Multiple regression for predictor of SWAL-QOL in patients not using NIV during meals (22 patients)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Independent variable | Coefficient | St. Error | t | p |
| Constant | 57.3540 |  |  |  |
| MIP | 0.5313 | 0.5313 | 3.286 | **0.003** |
| FVC | 0.3593 | 0.1324 | 2.713 | **0.01** |

MIP, maximal inspiratory pressure, FVC, forced vital capacity