measured by master instructor was 10.5 (9.0). Mean (SD) difference between skin scores by physicians and master instructor was 7.7 (9.5) units. In the unavailable analysis, video education significantly reduced the difference from the gold-standard score (3.1–1.96, 95% CI –3.83 to –0.19) whereas live demonstration did not show additional enhancement in scoring skill. Effect of education program was significantly different according to the physician’s status and patient’s disease type (diffuse vs. limited). In addition, male patient, shorter disease duration and higher gold-standard skin score was associated with more accurate skin scoring irrespective of the education. In the multivariable analysis where above clinical factors were adjusted, video education also led to significantly accurate skin scoring (table 1). When the educational effect was stratified by individual site of examination, face and distal extremities showed greater enhancement of scoring accuracy whereas difference from gold-standard score in proximal extremities was rather increased. ICC of physicians’ skin scores was acceptable over all scoring times (0.83 to 0.88) but was not significantly changed after the education.

Conclusions: The mRSS education program can significantly enhance the accuracy of rRSS, which is mainly achieved by video education.

REFERENCES:

Disclosure of Interest: None declared


AB00776 MUSCLE ULTRASONOGRAPHY: A POTENTIAL NEW DIAGNOSTIC TOOL FOR INFLAMMATORY MYOPATHIES

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Background: Quantitative muscle ultrasound (QOMUS) imaging has proven to be a useful, non-invasive technique to visualise normal and pathological skeletal muscle tissue. Electromyography (EMG) findings are not always disease specific in patients suspected of dopapatic inflammatory myopathies (IIM).

Objectives: To assess diagnostic value of QOMUS in patients suspected for an IIM and to compare results with EMG.

Methods: In 57 patients, suspected for IIM, panel diagnosis blinded for QOMUS was used as reference standard. QOMUS results were used to classify patients according an ultrasound neuromuscular disorder (NMD) algorithm (normal/borderline/abnormal). The predictive value of QOMUS and EMG was assessed in a two by two table and a multivariate logistic regression model.

Results: Twenty-two patients (39%) were diagnosed with IIM; 8 polymyositis, 4 dermatomyositis, 4 necrotizing myopathy, 3 inclusion body myositis and 3 non-specific myositis. Sixteen patients were classified with other NMD. We found an increased echointensity of the sternocleidomastoid, biceps, forearm flexor and tibialis anterior in the IIM group. Sensitivity, specificity, positive and negative predictive values (PPV/PPV) were 82%, 51%, 51%, 82% for ultrasound NMD algorithm and 63%, 64%, 75% for EMG. Multivariate analyses showed area under the curve (AUC) (0.81 (0.69–0.92) for ultrasound NMD algorithm, EMG (0.79) (0.67–0.92) and ultrasound NMD algorithm plus EMG (0.82) (0.70–0.93).

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age; ≥50 year</td>
<td>2.97 (0.65–13.59)</td>
<td>2.88 (0.62–13.28)</td>
<td>2.98 (0.62–14.21)</td>
</tr>
<tr>
<td>Serum CK; &gt;x upper limit</td>
<td>7.52 (1.57–36)</td>
<td>8.76 (1.55–49.55)</td>
<td>7.35 (1.22–44.21)</td>
</tr>
</tbody>
</table>

Muscle ultrasound:
Total echointensity of proximal muscles/measured muscle
Total number of affected proximal muscles
Distal muscles affected (yes/no)

NMD algorithm:
No NMD Reference: 1.61 (1.03–18.67) 1.62 (0.13–19.57)
Borderline presence of NMD (yes/no) 1.01 (0.44–20.55) 3.01 (0.43–21.09)

EMG qualitative report:
Negative myopathic results Reference: 1.00 (0.08–11.67) 0.94 (0.07–12.09)
Positive myopathic results 1.00 (0.08–11.67) 0.94 (0.07–12.09)
Cox and Snell R square 0.28 0.26 0.28
Nagelkerke R square 0.38 0.35 0.38
Hosmer Lemeshow Test 0.91 0.94 0.69
AUC (95% CI) 0.81 (0.69–0.79) 0.87 (0.67–0.92) 0.82 (0.70–0.93)