







PRACTICAL EXPERIENCE WITH VOJTA 'S RL IN PATIENT WITH LBP

- Offers GP for up-righting the spine and pelvis on arms with C and T spine straightening.
- Influencing deep paraspinal muscles and thus decreasing pressure on the disk
- Create spine stabilization by evoking diaphragm, abdominals and pelvic floor co-activation





VERIFICATION OF EFFECT OF REFLEX LOCOMOTION ACCORDING TO VOJTA IN PATIENTS WITH PERIPHERAL FACIAL PALSY



AIM OF THE RESEARCH:

- To verify the effect of Reflex locomotion according to Vojta in patients with peripheral facial palsy by surface electromyography
- Imediate effect was evaluated by:
- 1. SEMG
- 2. functional tests of mimic muscles
- 3. subjective response of the patient

PATIENT'S GROUP CHARACTERISTICS

- 7 patients with peripheral facial palsy due to inflammation
- 4 men and 3 women age from 9 70 (mean age 31 years)
- All patient underwent neurological examination which was diagnosed as peripheral facial palsy

SURFACE EMG MEASUREMENT

- 16 channel surface electromyograph Telemyo-Noraxon with telemetric signal transfer
- Software MyoClinical (version 2.10)





SEMG MEASUREMENT



- two electrodes were placed on cleaned and scrubbed skin above muscular belly and parallel to the muscular fibres
- Measured muscles:
- m. frontalis dexter et sinister,
- m. orbicularis oris dexter et sinister
- mm. suprahyoidei dexter et sinister

SEMG PROCESSING

- Sampling ferquency 100Hz
- Full rectification
- Smoothing RMS 100 ms
- Filtration from frequencies above 500Hz
- Data collection mean amplitude, peak amplitude, difference in % from side to side



SEMG MEASUREMENT

- 1) quiet supine lying
- 2) eye brows elevation in supine
- 3) eyes closing
- 4) forced eyes closing
- 5) mouth puckering up in supine
- 6) showing teeth in supine
- 7) liquid swallowing (by stick) in sitting

RL ACCORDING TO VOJTA -REFLEX TURNING 1ST PHASE

Initial position:



Stimulation zone - "breast zone"

REFLEX TURNING 1ST PHASE

Stimulation points: proc. mastoideus on occipital side angulus mandibulae os zygomaticum - laterally to the eye lid <u>m. mylohyoideus - stimulation of swallowing</u>

REFLEX LOCOMOTION TREATMENT - REFLEX TURNING 1ST PHASE

- Total time of stimulation was 20 minutes 10 minutes each side
- Side of facial palsy was treated first as occipital side



- mean amplitude increased in palsy side muscles in 48 out of 105 cases
- peak amplitude increased in palsy side muscles in 51out of 105 cases
- Side difference of mean amplitude decreased between palsy and healthy side in 46 out of 105 cases
- Side difference of peak amplitude decreased between palsy and healthy side in 42 out of 105 cases

PATIENT 'S SUBJECTIVE CHANGES AFTER RL TREATMENT:

Voluntary movement:

- 5 patients reported improvement
- in 1 no change
- 1 became worse

Articulation:

- 6 patients improved (in 4 patients improvement was observed visually by the therapist)
- in 1 no change

Swallowing:

improvement reported all tested patients

EVALUATION OF PHOTOGRAPHS

Lagopthalmus:

- in 2 patients disappeared completely
- in 3 decreased
- in 1x decreased during forced eyes closing

Inability to close the mouth when pucker up:

 This was observed in two patients and in both patient improved after RL treatment

EVALUATION OF PHOTOGRAPHS

Synkinesis:

- in 2 p. eye closing disappeared during mouth puckering up
- in 2 decreased lip corner depression during forced eyes closing
- In 1 decreased platysma tension during eye closing

PATIENT WITH BILATERAL FACIAL PALSY





Diapositiva 18

P3 Péťa; 11/11/2008



RIGHT SIDE FACIAL PALSY



RIGHT SIDE FACIAL PALSY



STUDY CONLUSIONS

SurfaceEMG:

- positive effect of RI considering improvement in symmetry of muscular activity was measured in less than 50% of cases
- This could be due to onset of muscular fatique after long period of RL treatment

STUDY CONCLUSIONS:

Patient 's subjective self-evaluation:

 Vojta´s approach of RL (reflex turning 1) had mostly positive effect on voluntary movement, articulation and on swallowing

Comparative evaluation of photos before and after RL:

 RL had a significantly positive influence on lagopthalmus, synkinesis and on disability of mouth closing during puckering up

GENERAL CONCLUSIONS FOR RL IN TREATMENT

- RL is approach which can be used in order to activate muscles which are difficult for patient to activate voluntarily
- Can be used prior to voluntary exercise in order to facilitate correct muscular synergies and promote these synergies into movement patterns
- Should be used in adult patients besides the other techniques and methods (facilitation, inhibition, strengthening, stretching, mobilization)

GENERAL LIMITATIONS OF RL

- Complete lesion of spinal cord ?
- Lack of neuroplasticity
- Lack of patient or family members cooperation
- Lack of expected (anticipatory) responses
- Lack of skillfull and well trained therapists