Evidence Based Practice for Multiple Sclerosis Patients

ASOT 2013 VISION IN ACTION CONFERENCE

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Evidence Review

WHICH OCCUPATIONAL THERAPY NEUROREHABILITATION INTERVENTIONS AND TECHNIQUES INCREASE PATIENTS WITH MULTIPLE SCLEROSIS PERCEIVED QOL?
Targeted person, task, environment or performance component:

- Adults with Multiple Sclerosis

- Most appropriate intervention techniques to increase effective ADL completion and QOL.
WHY ADDRESS THIS?

Need

OT’s work with a large number of individuals who have Multiple Sclerosis.

Not a lot of research on this area especially in the United States.

Confusion regarding best practice for MS patients intervention and not increasing fatigue.
WHY ADDRESS THIS?

Importance

Investigation of evidence is critically important for effective:

- OT Assessment
- Design of intervention plans
- Implementation of intervention strategies
- OT outcomes
WHY ADDRESS THIS?
Rationale
Investigating Adult MS patients interventions:

- Validates practitioners’ tacit knowledge.
- Links practice actions to intervention strategies validated in the literature.
- Assists practitioners in providing education to various stakeholders (client, family, colleagues, administrators, third party payers and others).
WHERE IS THE EVIDENCE?

Database Sources:

- JRRD- Journal of Rehabilitation and Research Development
- PsycINFO
- PubMed
- CINAHL- Cumulative Index to Nursing and Allied Health Literature
- OT Search
- Academic Search Premier
WHAT IS THE EVIDENCE?

- Effective Assessments for MS Patients
  - SF-36
  - 9 HPT
  - HR-QOL
- MMT and ROM
WHAT IS THE EVIDENCE?

Significant relationships were found between more routinely engaging in physical exercise, practicing good nutrition, being involved in spiritual and personal growth experiences, maintaining positive interpersonal relations, and maintaining higher role participation.
WHAT IS THE EVIDENCE?

Robot therapy can be applied to patients with multiple sclerosis in a clinical setting and may be beneficial for reduction of the upper limb motor co-ordination deficit.
WHAT IS THE EVIDENCE

Progressive Muscle Relaxation techniques are effective in improving the quality of life in patients with multiple sclerosis.

Three quarters of the respondents’ from studies reported the use of memory strategies. While half the participants used electronic memory aids sometimes or most of the time.

FIM scores among MS patients were small for many participants, but were clinically relevant and correlated highly with hours of care required.

Lifting task and ramp-and-hold task are useful to patients with multiple sclerosis.
WHAT IS IT TELLING US?

We must build endurance through repetition with MS patients.

Creating adaptive techniques for patients with MS is an effective treatment method.

Robot assisted therapy proves to be beneficial in decreasing tremor and increasing stability.
Callesthenic exercises are effective when added to a neurorehab program.

Small changes in nervous system increase ability to be independent longer.
PRACTICE GUIDELINES

• Teach compensatory tasks within the context of occupation-based activities.
• Encourage exercises of any sort which are not harmful or exhausting to increase movement and QOL.
• Increase safety awareness during task completion.
• Repetition of tasks IS helpful in daily routine.
• Gross motor must be addressed before fine motor.
Goals of the Bioness H200

Improve patient's hand function
Treat impairments such as spasticity, limited hand function and range of motion
Achieve independence in a functional task or activities of daily living with the assistance of electrical stimulation
Improve impairments in the upper extremity with the goal of maintaining change when the electrical stimulation is removed.

Callisthenic Exercises

found/detected that fatigue and anxiety decreased and muscle strength and balance improved.

http://youtu.be/cmM5KOLNlGE
PRACTICE OPTIONS

Assistive Devices

FES System
IMPLICATIONS FOR FURTHER STUDY

• There is little research completed on neurorehabilitation techniques in all age groups.

• More research should be done on fine motor movements and the impact of minute movements in retraining the nervous system among MS patients.

• Quality of life perception lies in what they feel they can no longer do, adaptation is key.

• Bioness H200 has more research on disuse and stroke population but has been 72% effective among treatment studies of patients with MS who are having fine and gross motor difficulties.
WHERE GO IN THE FUTURE?

Summary:

There is evidence to support the use of neurorehabilitation interventions as mentioned above, for predicting performance with ADL’s and perceived QOL.

The patients ability to comprehend the task at hand is key.

IADL/ADL tasks must be broken down to small components and built upon.
WHERE GO IN THE FUTURE?

Each population of MS should be looked at and analyzed in smaller groups before large studies should be compiled.

This disease is rising among those in the United States and we will begin to see more patients who want to stay in their homes.

Assistive technology and devices can help patients maintain independence longer which increases perspective on quality of life.
REFERENCES


