UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Rehabilitative Approach To The Neurodegenerative Diseases

2627-2-I0201D136-I0201D206M

Aims

DdD 1 – Knowledge and Understanding
Acquire knowledge of the main clinical presentations of neurodegenerative diseases (Parkinson's, MS, ALS, dementias, CMT) and of rehabilitation principles based on neuroplasticity.

DdD 2 – Applied Knowledge and Understanding
Apply tools and rehabilitation strategies in the assessment and management of patients with neurodegenerative conditions.

DdD 3 – Autonomy of Judgment
Develop clinical reasoning skills to define personalized therapeutic goals.

DdD 4 – Communication Skills
Communicate effectively with the multidisciplinary team, the patient, and the caregiver.

DdD 5 – Learning Skills
Promote autonomous learning through guidelines, scientific literature, and updated clinical materials.

Contents

General principles of neurological rehabilitation: neuroplasticity, team roles, assessment scales.

Parkinson's disease: symptoms, rehabilitation strategies.

Multiple Sclerosis and ALS: adaptive rehabilitation, fatigue management, functional and palliative support.

Dementias: cognitive and motor implications, stimulation and orientation techniques.

Charcot-Marie-Tooth (CMT): motor and sensory impairments, use of orthoses, and targeted training.

Detailed program

• Lesson 1 – Introduction and General Principles
Theoretical part (1.5h)

Introduction to neurodegenerative diseases: definition, classification

Neuroplasticity and functional recovery

Role of the physiotherapist within the rehabilitation team

Functional, motor, and cognitive assessment tools

Case discussion (1.5h)

• Lesson 2 – Parkinson’s Disease and Movement Disorders
Theoretical part (1.5h)

Pathophysiology of Parkinson’s disease: motor and non-motor symptoms

Rehabilitation strategies

Case discussion (1.5h)

• Lesson 3 – Multiple Sclerosis and ALS
Theoretical part (1.5h)

MS: symptoms, clinical variability, adaptive rehabilitation

ALS: support principles, functional maintenance, complication prevention

Fatigue management, orthoses, assistive devices

Case discussion (1.5h)

• Lesson 4 – Dementias, CMT and Cognitive-Motor Approach
Theoretical part (1.5h)

Alzheimer’s and other dementias: cognitive, behavioral, and motor symptoms

Non-pharmacological therapies: cognitive stimulation, occupational therapy

Communication with patient and caregiver

Hereditary neuropathies: focus on Charcot-Marie-Tooth (CMT)

Definition, sensory-motor symptoms, gait difficulties

Rehabilitation strategy

Case discussion (1.5h)

Prerequisites

Knowledge of neuroanatomy, neurophysiology, and neurological semiology

Teaching form

Total hours: 12
Lectures (theoretical): 6 hours
Interactive sessions (case analysis, discussions, practical exercises): 6 hours

Textbook and teaching resource

Materials and bibliography provided by the lecturer during the lessons

Semester

First Semester

Assessment method

Multiple-choice quiz

Office hours

By appointment
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Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY