Corrado I. Angelini

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Basic Information

Name: Corrado I. Angelini
(Aug 1941–)

Birth Location: Padova,Italy

Title: Neurologist

Affiliation: Unknown

Honors: Founder of Neuromuscular Center University of Padova
Gaetano Conte Prise for Clinical Myology,Kusadasi,Turkey,2005.

1. Education

Corrado Angelini (born August 3, 1941) is a neurologist with a particular interest in neurometabolic and neuromuscular disorders. He received his medical degree at the University of Padova and has done his residency at the University of Padova, Mayo Clinic. He passed FLEX Examination in Minneapolis, in 1973 and obtained the North Dakota State License Examination (No. 3339), since 1973, he has held a California State License Examination (No. A-33174); renewed in 2022.

2. Career

Angelini while a Postgraduate Research Assistant and Associate at Mayo Clinic, Rochester, Minnesota, from 1970 to 1972 analyzed muscle fibroblasts and leukocytes of glycogenosis type 2, described fingerprint body myopathy and mitochondria lipid glycogen storage disease, and discovered carnitine deficiency in humans; he then became Assistant Professor of Neurology, at the University of Padova, Italy, in 1973 and Associate Professor of Paediatric Neurology, the University of Padova, Italy, in 1977 started a group and a laboratory on neuromuscular diseases completing studies on glycogenosis and carnitine during growth and secondary carnitine deficiency for hemodialysis or poor milk nutrition or beta-oxidation defects that result in secondary carnitine deficiency states.

Corrado Angelini, MD, has taught medical students, dental students residents in neurology, neurosurgery, and physiotherapists as a full professor of neurology at the University of Padova, Italy, where he also serves as coordinator of the Ph.D. program in neurosciences and director of the Neurology Residency Program and the Department of Neurosciences Neuromuscular Center. He has been a coordinator of the program on speech therapy and neurophysiology. He has followed an exchange program under Erasmus for foreign medical students and coordinated and tutored more than 20 medical theses and 30 specialty theses in neurology and physiotherapy and Ph.D. theses. He has collaborated to evaluate being part of the tribunal four these at the University of Deusto, Bilbao, Spain.

Dr. Angelini after he earned his medical degree from the University of Padova completed two fellowships with the Muscular Dystrophy Association, a research fellowship in 1972 at the Mayo Clinic, where he was a resident in Neurology and a senior fellowship in 1978 at the University of California Los Angeles on ataxias. In 1983 and 1988 he was a Visiting Professor at the University of Colorado, Neurology Department and Boston where he lectured on the history of neurology and discussed neuromuscular cases.

Angelini at the Neurosciences Department of Padova developed a Telethon Bank and European Biobank part of BBMRI and through his biobanking background and experience discovered several molecular defects in BMD with enormous dystrophin and recessive and dominant limb-girdle dystrophies. during his clinical work at the University of Padova. While on sabbatical with a senior MDA Fellowship he was Visiting Assistant Professor of Neurology, at Reed Neurological Research Center, UCLA Medical School, 1978-1979 and studied clinical and biochemical changes in several neuromuscular and metabolic cases including systemic carnitine deficiency, PDH defects, and Neutral Lipid Storage with Ichthyosis; then studied Friedreich's ataxia and mitochondria at the University of Colorado Health Sciences Center, Denver 1984

Biobanking was used both for the diagnosis of primary biochemical defects in inherited neuromuscular diseases, such as phosphorylase and CPT deficiency, for clinical trials, and to study the pathophysiology of muscular dystrophies, study on cybrids in mitochondrial encephalomyopathies with MELAS syndrome. A major discovery in the '90 was the molecular defects in the three LGMD that were identified by fruitful collaboration with collaborating scientists of various USA and European universities, with Angelini's group since he visited and his collaborators studied i.e Columbia University, University of Pittsburgh, and the University of Southern California, he also delivered lectures to this Universities and while he was Visiting Professor at the University of Denver and in Boston University.

He organized in Venice and Padova in 1980,1990,1995 International conferences on Muscular Dystrophy Research, the one in 1990 was a satellite conference of the International Congress of Neuromuscular Diseases (ICNMD) in Munich and the books Abstracts and Lectures were published by Excerpta Medica.

On March 26, 1996, Angelini was elected member of the executive World Federation of Neurology (WFN) Committee and contributed to planning for the ICNMD meeting in Adelaide., Australia, and in the following meetings in Istambul, Turkey, Naples, Italy, Nice, France Toronto, Canada, Wien, Austria.

The venue for these Congresses has been selected by the Executive Committee of the Research Group on Neuromuscular Diseases of the WFN and the Chairman and Secretary of the Group have been involved n their planning. The Group has also been involved in other activities such as preparing the classification of neuromuscular diseases. The last ICNMD was held in Bruxelles and Angelini gave a series of conferences in workshops on Brain in DM1subtypes and DM2 has differential involvement, Biomarkers of mitochondria, and lipid disorders. Quick clinical outcomes in neuromuscular disorders in the post-pandemic era. The lectures were well attended and discussed by international myologists that convened at the Conference.

Angelini is the Founder of the Clinical Neuromuscular Group at Padova Neuromuscular Center. He was an Associate Professor of Neurology, at the University of Padova, Italy, from 1980-1993 where he performed clinical trials in metabolic myopathies and Duchenne muscular dystrophy, collaborating with twelve Italian Centers, during this period his Center and laboratory here visited by other scientists on sabbatical such as Claude Desnuelle, from France and Steven Ringel, that became President of AAN, and by Gabriele Siciliano, now Chair of Neurology and Neuromuscular Task Force of EAN, and Nereo Bresolin, who became a full Professor of Neurology, at the University of Milan Italy, and Directed anIRCCS.Angelini is now active in the council of Ph.D. Program in Neurosciences, University of Padova, Italy, and has supervised Italian french, and Spanish PhD theses.

Angelini contributed to myology by recognizing biochemical defects in several metabolic and mitochondrial disorders and has described and identified in his familiar cases the molecular defects of two novel recessive forms of limb-girdle muscular dystrophy,i.e dysferlin in a family with proximo-distal weakness as the recessive dysferlinopathy (LGMD R2),beta-sarcoglycan in a child with beta-sarcoglycanopathy (LGMD R4), and a 15 amino acid variant of transportin-3 a protein involved in HIV import in one form of autosomal dominant transportinopathy (LGMD D2) in an Italian branch of a large Spanish family and a novel mutation in a Hungarian family, where now he is studying pathogenetic mechanisms and Quality of Life.

As Director Neurology Residency Program, University of Padova, Italy, 2002- 2011 he wrote a book on Clinical Neurology, Edited by Esculapio, now in the Third Edition, and is now a Consultant in Neuromuscular Disorders, at IRCCS S. Camillo Hospital., Venice, Italy, and a senior Researcher University of Padova, since 2013.

Angelini's major scientific research Interests are primary biochemical defects in inherited neuromuscular diseases, clinical trials in muscular dystrophies and DMD, ALS, myasthenia gravis, congenital muscle diseases, carnitine, and lipid metabolism. glycogenosis, neutral lipid storage disorders.

He received grants from Muscular Dystrophy Association, French Association for Myopathy (AFM -Telethon France), Enzo Ferrari, and Telethon (Italy) to support clinical research and trials.

3. Honors

He was awarded by Muscular Dystrophy Association a Senior Fellowship, in 1978, and from Lion Club Milano Host Award for Neurological Sciences, in 1981 for human carnitine deficiency status discovery, Grands Prix Newropeans 2004 for Eurobiobank, Gaetano Conte's Prize, in Kusadasi 2005 for clinical myology.

MEDICAL AND SCIENTIFIC ORGANIZATION MEMBERSHIPS
Angelini is a Member of several Scholarly Societies: Associate member, of the American Academy of Neurology, in 1976; Fellow American Academy of Neurology in 2017, member of the European Academy of Neurology and the American Neurological Association. He has participated in several meetings of the European Neuromuscular Center on rare neuromuscular disorders (**Figure 1**), optimal treatment for Duchenne Muscular Dystrophy, revising the nomenclature of limb-girdle, and in October 2014 at the 208the ENMC workshop, there was the formation of a European network to develop a European data-sharing model and treatment guidelines for Pompe disease, that originated the European Pompe Consortium, that met in Hamburg in 2020 Member of the InterERN Neurometabolic Disease workgroup, since 2021, member of TREAT NMD consortium. He has coordinated numerous trials using steroids in DMD and participated in the SMART trial in spinal muscular atrophies, sponsored by Telethon. He is an expert on metabolic myopathies and coordinates a group of physicians involved in ERT in adult glycogenosis type II.

He is a Founding Member of the World Muscle Society and the Italian Myology Society.

He serves on the Editorial Board of Neuromuscular Disorders, Neurological Sciences, Neurology, Acta Myologica, European Journal Translational Myology, Therapeutic Advances in Neurology, and Editor in Chief of Muscles.

He is contributing to two research topics in Frontiers of Neurology, on Development of the Precision Diagnostics and Treatment for Duchenne/Becker Muscular Dystrophy and Sleep Disorders in neuromuscular diseases: treatable conditions.

Figure 1. 23rd ENMC Workshop on "Rare Neuromuscular Diseases, from left, first raw: C.Angelini, C.H.Vermullen, C.Wallgreen-Peterson, F.Muntoni, A.E.H. Emery, second raw: L.Middleton, H.Hoser, K.Zorres, T.Grimm, M.Rutgers. 6 June 1993.

4. Publications

Angelini has written several books on Neuromuscular Disorders and Clinical Neurology, several Chapters in the History of Neurology and books on Metabolic Disorders, and over 700 peer-reviewed papers

Books: Acquired Neuromuscular Disorders.Springer Ed.2016, Second Edition 2022.

Genetic Neuromuscular Disorders: a case based approach, Springer Ed.2014, Second Edition 2018.

Neurologia Clinica, Esculapio Ed,2010, Second Edition 2014, Third Edition 2022.

Muscular Dystrophy Causes and Management Chapter 6 Ed.C.Angelini Nova Biomedica 2013.

Le Malattie Neuromuscolari,Piccin Ed,1994

Angelini C et al Muscular Dystrophy Research, from molecular diagnosis toward therapy, Excerpta Medica, International Congress Series, 134 Amsterdam, New York, Oxford, 1991.

Medicine in Mountain: Cleup Ed,1981

Intellectual property and Patents: GSGC Scale developed by Angelini for several Neuromuscular Disorders:

The GSGC scale has been developed and validated by Angelini for Duchenne dystrophy (Muscle & Nerve 1994, Acta Myologica 2012), alpha sarcoglycanopathy (Muscle & Nerve 1998), late-onset Pompe patients (Muscle & Nerve 2012) and published in the book: Muscular Dystrophy causes and Management Chapter 6 Ed.C.Angelini Nova Biomedica 2013.

The motor outcomes are different in various myopathies and depend on the correct diagnosis, the use of muscle MRI imaging might be helpful for follow-up of the proximal or distal muscle involvement, to detect fat, and connective tissue replacement, which might be absent in metabolic myopathies (1-3).
In this context, Angelini developed the use of the GSGC scale in LOPD, for clinical trials with Enzyme Replacement Treatment, DMD for clinical trials with deflazacort, branched-chain amino acids, and prednisone, and GSGCA scales in the natural history of LGMD R2. The development of "smart care" using telemedicine and eHealth technologies to date is mandatory.

Angelini has been active in health promotion and educative activities leading twenty Medical MOUNTAIN Medicine Courses at the University of Padova and three Mountain Medicine Courses in Nepal that reached the Everest K2 CNR Pyramid nearby Everest base camp. As a member of UIAA MedCom has written recommendations for traveling and trekking with neurological disorders The recommendations examine several neurological conditions and the problems posed by traveling to high altitudes, and in particular whether the underlying disease is likely to worsen. The neurological conditions include migraine and other types of headaches, transient ischemia of the brain, occlusive cerebral artery diseases, intracranial hemorrhage and vascular malformations, intracranial space-occupying mass, multiple sclerosis, peripheral neuropathies, neuromuscular disorders, epileptic seizures, dementia, and Parkinson’s disease. Attempts will be made to classify the risk posed by each condition and to provide recommendations.

Further Reading

https://onlinelibrary.wiley.com/doi/abs/10.1002/mus.23340
https://www.frontiersin.org/articles/10.3389/fneur.2020.00306/full
https://onlinelibrary.wiley.com/doi/full/10.1002/jmd2.12174 https://www.science.org/doi/abs/10.1126/science.179.4076.899
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https://www.nature.com/articles/ng1195-266 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1683222/