Italian neurology: past, present and future

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Summary

This short history of the Italian Society of Neurology focuses on its founders and leading personalities. The article also considers the present and the future of Italian neurology, emphasising in particular the scientific impact of Italian neurological research on the main international journals and the activities undertaken to increase the role of neurologists.

KEY WORDS: history of Italian neurology, Italian Society of Neurology, future of neurology

Italian neurology: the past

The history of Italian neurology has long been bound up with the treatment and study of mental disorders: indeed, the Società Frenopatica Italiana (Italian Phrenopathic Society) attracted scientists interested in brain and mental disorders. This society was founded in 1861 with the aim of studying the anatomy and physiology of the brain and nerves, as well as the organisation of hospitals for the treatment of mental illness.

In 1873, in Rome, the Società Freniatrica Italiana (Italian Society of Phreniatry) was born, bringing together experts in nervous and mental diseases.

At the start of the 1900s, several scientists, involved mainly in investigation of the anatomy and physiology of the central and peripheral nervous system and its pathological conditions, began to see the usefulness of an autonomous development of the neurosciences as a separate field comprising scientists involved in the study and evaluation of mental illness and in the organisation of psychiatric hospitals. Hence the creation of the Italian Society of Neurology (Società Italiana di Neurologia, SIN), which was officially founded in 1907 (Fig. 1) with Leonardo Bianchi, professor at the University of Naples as its first president. The individuals involved in this endeavour were the founders of the modern Italian neurology: Leonardo Bianchi, Carlo Besta, Amico Bignami, Ugo Cerletti, Cesare Lombroso, Giovanni Mingazzini, Onofrio Fragnito, Ottorino Rossi, Camillo Negro, Enrico Morselli, Eugenio Tanzi, Ernesto Lugaro, Camillo Golgi, and so on (Fig.s 2-5, over).

These founders of Italian neurology came from various prestigious Italian neurological schools:

– the school of Turin: founded by Cesare Lombroso, Camillo Negro, Ernesto Lugaro, and Dino Bolsi
– the school of Rome: Giovanni Mingazzini, Ugo Cerletti and Guido Gozzano
– the school of Pavia: Cesare Lombroso (who subsequently moved to Turin), Casimiro Mondino and Ottorino Rossi
– the school of Naples: Leonardo Bianchi and Vito Maria Buscaino.

In the period between the Second World War and the end of the 1950s, services for the treatment of neurological and mental disorders were generally located in psychiatric hospitals and the discipline was called clinica delle malattie nervose e mentali (nervous and mental diseases). Subsequently, in several hospitals, special units of neurology and neuropathology were created, separate from general medicine units, but until 1960 the law governing the general organisation of hospitals did not make provision for units of neurology in all major hospitals (indeed, there existed only a handful of neuropathology units, in large cities like Genoa, Milan, Rome, Turin, etc).

In the period 1950-1970 the neurologists who contributed most to the development of neurology in Italy were:

Figure 1 - The journal Rivista di Patologia Nervosa e Mentale, reporting the foundation of the Italian Society of Neurology in 1907.
Lodovico Bergamini, Turin;
Fabio Visintini, Parma, and his pupils, Giorgio Macchi and Mirko Carreras;
Lionello De Lisi, Genoa, and his pupils Cornello Fazio, and Carlo Loeb;
Carlo Berlucchi and Vittorio Tronconi, Pavia;
Gildo Gastaldi, Milan;
Paolo Ottonello and Cesare Ambrosetto, Bologna;
Giovanni Battista Belloni, Padua;
Vito Longo, Naples.

From 1970 onwards, the Italian Society of Neurology saw major changes, acquiring a more modern internal organisation. Neurology became separate from psychiatry and the clinics of mental and nervous system diseases started to be called neurology departments. In the universities, too, the professors of nervous and mental diseases preferred to be known as professors of neurology, splitting their teaching into neurology and psychiatry. Numerous subspecialities started to emerge and develop, attracting growing interest from young generations of neurologists (neuropsychology, neuropathology, clinical neurophysiology, clinical neurochemistry, neurogenetics, neuroimmunology, neuroimaging, neurorehabilitation, ophthalmology, etc.).

The following neurologists all contributed greatly to the transformation of the Italian Society of Neurology: Fabio Visintini, Eugenio Ferrari, Giovanni Alemà, Mirko Carreras, Giorgio Macchi, Carlo Loeb, Paolo Pinelli, Ennio De Renzi, Renato Boeri, Leontino Battistin, Elio Lugaresi, Diego Montanari, Luigi Amaducci, Davide Schiffer, Hrayr Terzian, Aldo Laterza, Giancarlo Guazzi, Cesare Fieschi, Vincenzo Bonavita, Guglielmo Scarlato, Franco Angeleri, and Nicola Rizzuto. The full list of presidents of the Italian Society of Neurology is given in Table I.

Figure 2 - Leonardo Bianchi, the first president of the Italian Society of Neurology.

Figure 3 - Cesare Lombroso.

Figure 4 - Ernesto Lugaro.

Figure 5 - Camillo Golgi, joint winner of the 1906 Nobel Prize for Medicine or Physiology.
Renato Boeri, who was director of the Istituto Neurologico Besta, had the great merit of founding (in 1979) the Italian Journal of Neurological Sciences, which became the society’s official organ. Published by Springer-Verlag and now called Neurological Sciences (since 2003), this journal has, over the years, acquired considerable international stature (Fig. 6).

Italian neurology: the present and future

In 2007, the Italian Society of Neurology celebrated its centenary and a book has been published, marking this milestone (Cento Anni della Società Italiana di Neurologia: le Origini e gli Sviluppi. Siena; Tipografia Senese s.n.c. 2011). Today, the Italian Society of Neurology has more than 3000 members and more than fifteen study groups active in the different branches of the neurological sciences; it has two journals, one published in English (Neurological Sciences, IF 1.45, published by Springer-Verlag; Fig. 6) and the other in Italian (Neurologia Italiana) and it organises numerous initiatives to promote the research and organisation of neurological care in Italy; it is also particularly active at international level. The passing years have seen major changes in the composition of the membership of the Italian Society of Neurology, with increasing proportions of women and of young people (Table II).

As far as Italian neurological research is concerned, despite the low levels of economic support traditionally channelled by Italian governments into research, neurology is, compared with other disciplines, one of the most active areas of research in Italy. If we look at the number of articles published by Italian neurologists in leading international journals (Fig. 7) there emerges a linear increment over the years, taking Italy to second position in Europe in 2009.

Currently, Italian neurologists are mainly devoted to emergency care (stroke and other emergency conditions involving the central nervous system, peripheral nerves and muscles), the treatment of complex disorders, like the many neurodegenerative diseases in which the support of complex laboratory investigations, including neuroimaging, neuropathology and neurogenetics, is needed in the diagnostic work up, in order to establish the exact pathogenesis and best course of treatment, and, finally, the treatment of many chronic diseases such as dementia, Parkinson’s disease and parkinsonisms, and the sequelae of many diseases of the central and peripheral nervous systems and muscles.

Emergency, complexity and chronicity are, in neurology, different aspects of the same conditions; in all these ambits, it is only through proper integration of science, therapy, teaching and relationships with patients and caregivers that we might achieve a more effective approach to the care of patients with neurological diseases.

To obtain these results, the Italian Society of Neurology, as it looks to the future, has the following aims:

– to improve the organisation of neurological care in our country in order to guarantee all Italian citizens the same the levels of care (networks for stroke and rare neurological diseases);
– to further improve scientific research, with better international exchanges;
– to improve training of young neurologists and the training provided in the strategic fields of neurology;
– to increase the number and quality of neurorehabilitation units;
– to improve relationships with patients, caregivers and associations of these groups.

In recent years, Italian neurology has attracted a great number of very enthusiastic and active young people, the majority enriched by international experiences. These are the individuals who will ensure the continuation of our work and the further growth of our prestige in the future.

Essential bibliography