

Mario Milletti's Contributions to Brain Tumors in the Mid Twentieth Century

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Abstract

Mario Milletti (1914-1959) was a pioneer of modern neurosurgery in Italy, one of the founders of the Italian Society of Neurosurgery in 1948. In this work the Author emphasizes the Milletti's contributions to brain tumors, which were important both from a diagnostic aspect and as regards the operating case studies. Especially significant was his study, published in *Acta Neurochirurgica* in 1950, on the angiographic differential diagnosis of different histological types.

Keywords: Milletti; Cerebral tumors; Neurosurgery; Neurovascular diseases

Introduction

Mario Milletti was an Italian neurosurgeon and a pioneer of modern neurosurgery in Italy. He first devoted himself to histology and pathological anatomy and later, from 1942, to the neurosurgery. He attended the Neurosurgical Clinic of Berlin with Tonnis, then the Neurological Clinic of Stockholm with Olivecrona and the Neurological Clinic of Manchester with Jefferson; in 1949-1950 he visited the major Neurosurgical Centers in the United States. From 1947 Milletti was Head of the Institute of Neurosurgery at the Maggiore Hospital in Bologna. He was, in 1948, one of the nine founders of the Italian Society of Neurosurgery. Previously I published an article [1] to commemorate the centenary of his birth; in the present work the Milletti's contributions to brain tumors are emphasized briefly.

Materials and Methods

Mario Milletti was interested in many aspects of neurosurgical pathology (intracranial aneurysms and other neurovascular diseases; pediatric and functional neurosurgery, intracranial neoplasms and other fields). Certainly he was very interested in diagnostic cerebral angiography, especially regarding intracranial tumors, the subject of some of his publications [2-4]. He improved his knowledge in this field especially during his time in the Clinic of Berlin with Wilhelm Tonnis. The most important and best known work is a monography published in 1951 in the first Supplement of *Acta Neurochirurgica* [4], in which Milletti, based on 203 cases of cerebral tumors examined by means of angiography, investigated the possibility of establishing a differential diagnosis between different histological types, concluding that this is possible in an high percentage of glioblastomas and meningiomas. He was among the very first in Europe to use the radioactive isotopes for diagnosis of intracranial tumors; he reported in 1957 his quite positive experience in forty cases observed at Neurosurgical Department at Maggiore Hospital in Bologna, Italy [5,6]. I believe it is significant the surgical series of seventy-three cases of brain tumors in children and adolescents presented by Milletti at a Paediatrics Meeting in 1954 and

published the following year [7] in this work Milletti assessed in particular the incidence of epilepsy in patients aged from 2 to 18 years and found that seizures occurred in 33.3% of forty two supratentorial tumors. In 1956 the Italian neurosurgeon reported some cases of olfactory groove meningiomas successfully treated through bifrontal approach. He described in detail the clinical and arteriographic findings of such tumors and the surgical technique [8].

Finally, I point out a learned report at the Seventh Congress of the Italian Society of Neurosurgery (December 1956) concerning the tumors of the cranial nerves [9]. Milletti described in detail the pathologic aspects of schwannomas and neurinomas of the third, fifth, seventh and eighth cranial nerves and also the typical neuropathological picture of neurofibromatosis.

Results and Conclusions

As mentioned above, the best known Milletti's work concerns the angiographic differential diagnosis of brain tumors, published in 1950. It's importance is demonstrated by the fact that it has been cited in many books and papers published in that time and also in the following years. I mention, for example, some of them: Kautsky and Zulch [10], Grote and Schiefer [11], Olivecrona and Tonnis [12], El-Banhawy and Walter [13], Stattin [14], Krayenbuhl and Yasargil [15], Telenius [16], Leeds et al. [17], Archer [18] and others. Furthermore it must be emphasized his extensive experience in brain tumors surgery and also his deep knowledge in the field of neuro-oncology. In this respect I like to underline the Author's conclusion in the work on cranial nerve tumors "we must not forget that a subject in a practical nature such as neurosurgery cannot and must never be separated from a basic science as neuropathology".

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