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Abstract

In 1779, a chair entitled “Malattie degli occhi e della vescica urinaria” (“Eyes and Urinary Bladder diseases”) was established at the University of Naples and was assigned to Michele Troja, Enlightenment scientist, physician and surgeon. As in the case of Ophthalmology teaching, assigned to Joseph Barth, at the University of Vienna, also in Naples this was not recognized as an independent chair until later on, in Vienna with Joseph Beer and in Naples with Giovan Battista Quadri, a student of Beer. Michele Troja in 1780, gathered all his university lectures on eye diseases into a book that constituted an Ophthalmology text for students and physicians. This text, which today has considerable historical interest, was used for many years also after Troja's teaching ended.

Introduction

In the second half of the XVIII century, the King of Naples, Ferdinand IV of Bourbon, ordered the establishment of several university chairs of medicine and surgery, at the hospital of Santa Maria del Popolo degli Incurabili, which became a teaching hospital, according to the modern concept of combining theoretical teaching with clinical practice. Therefore the chair of “Diseases of the Eyes and Urinary Bladder,” was established in 1779; an unusual combination designed to pursue the teaching of subjects for which there was no specific university path of learning, but which had a prevalent role in the clinic and surgery of the eighteenth century. Certainly, the presence at the University of Naples of Michele Troja, who, in Paris, had devoted himself to the study and clinic of ocular and uro-genital pathologies, played a decisive role.

Privacy

Methods

The research highlights the succession of events that led to the birth of teachings, particularly in ophthalmology. This research was conducted using Troja's original text, as well as documents from the University Library, the Historical Archives, and the National Library of Naples. It focuses on the history of Viennese ophthalmology and examines the biographies of Michele Troja, Joseph Barth, and Joseph Beer.

Results

Michele Troja¹ (Andria, 1747 Naples, 1827) ([Figure 1](#)), was a physician, surgeon and researcher in Naples during the second half of the 18th and early 19th centuries. He went to Paris on a scholarship to complete his medical, surgical and scientific training. As an ophthalmologist, during his stay in Paris, Troja collaborated with the physiologist Felice Fontana (Pomarolo, 1730 Florence, 1805) on his research on the anatomy of the ciliary body of the eye; during the same period he studied and applied a system for artificially producing cataracts in the eyes of human and animal corpses. Troja is also remembered for the invention of the “lachrymal cannula,” adopted in the surgical treatment of lacrimal fistulas. This was presented years later, with some minor modifications, as Dupuytren's “lacrimal cannula.” In 1773, the University of Naples acquired what had been the Jesuit College, following the suppression of that order in 1767. All university chairs and teachings were established there, except those related to medicine and surgery, which were placed at the Hospital of the Incurables². All the chairs were assigned by royal nomination and not by public competition. The chairs of surgery (Nicola Franchini) and obstetrics (Domenico Ferrara) were established in 1777. Subsequently, in 1779, those of Eye and Bladder Diseases were appointed to Michele Troja, and Experimental Physics was appointed to Giuseppe Saverio Poli; in the same hospital, there was an anatomical dissection room.³



Figure 1. Portrait of Michele Troja, once located at the Royal Medical-Surgical Academy of Naples, now no longer available.

The convergence of these two surgical domains, including cataract surgery and bladder stone surgery, held a prominent position in eighteenth-century surgical practices. These

Privacy

constituted two old surgical techniques addressing highly prevalent pathologies and were regarded among the few potentially curable conditions. They were already amalgamated under the expertise of surgeons. Indeed, in Italy, for over three centuries, this dual art was predominantly practiced by numerous empiricists, often coming from the Preci area in Norcia. These surgeons operated in non-hospital settings, working as itinerant practitioners. The instruction and application of these two surgical disciplines thus assumed a pivotal role in shaping the concept of a modern Polyclinic based on research and the dissemination of medical science. Nevertheless, Troja faced challenges in conducting his surgical practice, due to both the limited availability of the hospital and the competition from his colleagues. In 1814, the School for eye and bladder diseases was assigned to professor Salvatore Di Feo. In 1815, the Royal Ophthalmiatric Clinic was established, and assigned to Giovanni Battista Quadri (Vicenza, 1780–Naples, 1851), a pupil of the viennese Joseph Beer. Michele Troja, *Regis honorarius chirurgus in cathedra de morbis oculorum & vesicae*, held a regular course of lectures throughout the years of his teaching; these lessons were collected in a textbook ([Figure 2](#)). It is a 470-page text on ophthalmology⁴ which deals with anatomy, physiology and, above all, ocular pathology, as well as the history of the discipline. This work was considered valid and current until 1815, when it was adopted by Giovan Battista Quadri as a textbook for the Ophthalmology Clinic at the University of Naples.



Figure 2. Frontispiece of *Lezioni sugli occhi* by Michele Troja.

It consists of three sections:

1. The structure of the eyes and vision: four lessons with 33 articles on the anatomy and physiology of the eye.

2. Diseases of the external parts of the eye: 5 lessons with 28 articles, among which the one on lacrimal fistulas is particularly noteworthy.
3. Diseases of the eye: 8 lessons with 45 articles, which mainly deal with cataract and surgical therapy, describing the different modalities in use at that time,

Tracing the history of university teaching of ophthalmology in Europe, in 1773, in Vienna, under the orders of Empress Maria Theresa, the Chair of Anatomy was entrusted to Joseph Barth ([Figure 3](#)) (Valletta, 1745 Vienna, 1818) with the task of teaching Ophthalmology. The following year Barth occupied the chair of Anatomy and Ophthalmology and then in 1786, the chair of Anatomy and Physiology. From 1791 to 1819 George Prochaska (Blížkovice, 1749–Wien, 1820), a pupil of Barth, held the chair of “Higher anatomy and ophthalmology”.³ Ophthalmology did not exist as an independent subject, but was assigned to the field of surgery. With Georg Joseph Beer ([Figure 4](#)) (Vienna 1763–1821) ophthalmology gained its real autonomy in the University of Vienna. The great merit of Beer was to demand and obtain a “formal” separation of ophthalmology from surgery which was achieved in 1812 with his appointment as Professor of Ophthalmology, as teacher in *privatissima*, and the institution of a separate clinic for Ophthalmology in the General Hospital of Vienna, in 1813 ; in 1818 the first chair of ophthalmology was established in Vienna, appointed to Joseph Beer.⁵



Figure 3. JOSEPH BARTH. Line engraving by T. Benedetti. Wellcome Collection 809i.



Figure 4. GEORG JOSEPH BEER Lithograph by K. Lanzadelly after A. F. Kunike. Wellcome Collection 992i.

Discussion

The University of Naples was founded in 1224 by Frederick II of Hohenstaufen, and the University of Vienna, Alma Mater Rudolphina, is the oldest of the German-speaking universities, having been founded in 1365; for both it was prestigious to establish teachings of the sciences that were developing over the centuries. In these universities the medical-surgical faculties were enriched, in the eighteenth century, by the new methods of research and study, which followed centuries of immobilism, due to the immovable conceptions of Galen and the dominant Catholic doctrine; moreover, the doctrine of the sciences, inspired by the concepts of the Enlightenment, needed an increasingly and more effective diffusion. Ophthalmology also had a significant university path, thanks to advances due to eminent surgeons such as Daviel, Michael de Wenzel, Scarpa, and others, and, for this reason, the Universities of Vienna and Naples considered it essential to provide a teaching that could divulge the new and important knowledge. But the concept of “specialized surgery” was yet to come, which is why it was difficult, in the first instance, to assign a professorship to a single specific subject; therefore, in both cases we have examined, the teachings of ophthalmology were combined with other subjects: anatomy for Barth and diseases of the uro- genital system for Troja. But, at the beginning of the nineteenth century, the medical-surgical faculties, due to the tumultuous development of science and surgical practice, were going to establish more teaching and even autonomous chairs in relation to the different branches; it was thanks to these fundamental developments that the University of Naples established the Reale Clinica Oftalmiatria in 1815, directed by Giovan Battista Quadri, and the University of Vienna in 1818 established the chair of Ophthalmology directed by Joseph Beer.

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