

Professor Thoma Ionescu – founder of modern surgical practice in Romania

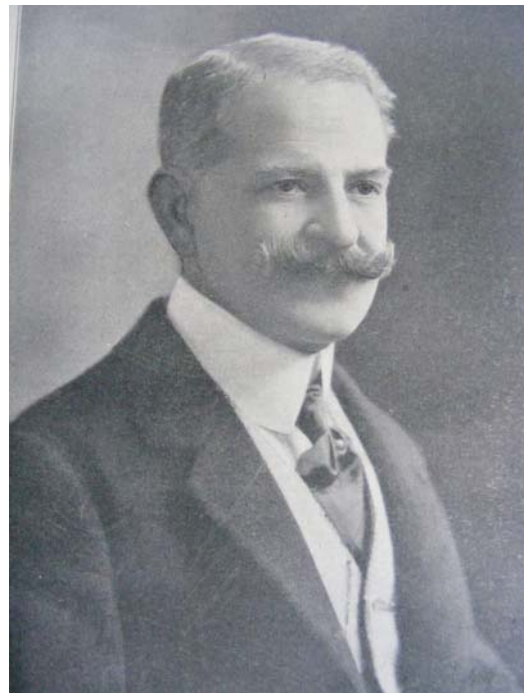
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Professor Thoma Ionescu was born in Ploiesti in 1860. He attended primary school at the Buholtzer Institute in Bucharest and high school at St. Sava. He graduated in 1878 and went to Paris where he enrolled in the Faculty of Medicine and the Faculty of Law 1879. He followed the same time studies at both colleges until 1882, when law becomes licensed. That same year the hospital discharged promotes competition in Paris. During medical activities, he completed the first year of surgery with Prof. Nicaise at Laë nec Hospital, second year with Professor Guyau at Beaujon Hospital, and the third year with Professor Tillaux also at Beaujon Hospital.[1][12]

In 1885 is provisionally appointed by national contest of hospitals to serve his residency under Professor Bourneville in the Bicêtre Hospital. In 1886 he was installed as resident (Interne des Hôpitaux de Paris), and spends four years of training in the surgical specialty, and is, in turn, resident of Professor Peyrot (Bicêtre), Paul Berger (Tenon), Le Dentu (St. Louis) and Verneuil (Pitie).[1][12]

In 1887 he obtained through competition the title of anatomy assistant (aide d'anatomie) and is ranked first in the series of that year.



After the competition for the post of prosector of the Faculty of Medicine, he will provisionally occupy this position for 3 years (1888, 1889 and 1890) and in 1891 is acknowledged as defined prosector of the Faculty of Medicine.

In 1890, the memorial called "internal retroperitoneal hernias " got the „Laborie French Academy Award for Medicine. Two years later, in 1892, obtained a PhD in Medicine with his thesis: "Evolution of intrauterine pelvic colon".[3]

In 1892, Professor Thoma Ionescu attends the aggregate for Anatomy of the Faculty of Medicine of Paris and is allowed after the first theoretical and practical evidence. That same year, France's Ministry of Public Instruction delegates Prof. Dr. Thomas Ionescu, at that time prosector of the Faculty of Medicine, to study and report the anatomical education in universities in Germany and Austria.

In 1894, together with Prof. Paul Poirier, then head of anatomical works (Chef des Travaux Anatomiques) of the Faculty of Medicine in Paris, Adrien Charpy Professor at the Faculty of Medicine of Toulouse and Professor Nicolas of the Faculty of Medicine of Nancy, Dr. Thomas Ionescu collaborated in drafting the first installment of volume IV of the anatomy of the most important treaty designed in France by that date ("Traité d'anatomie humaine, Masson et Cie Ed, Paris 1894).[2][4]

It is worth mentioning here that Professor Thomas Ionescu was the anatomist who first described in detail in an anatomy treaty the sigmoidian large bowel, called by him "pelvic colon".[4]

Also in 1894, a special law created the Institute of Topographical Anatomy and Experimental Surgery in Bucharest, and the jury's decision was that the chair will be occupied by Professor Thoma Ionescu. Thus, in February 1895, Professor Thoma Ionescu took the directorate of the Institute of Topographical Anatomy and Experimental Surgery and of the Surgical Clinic of the „Coltea Hospital”. In 1903, the institute was relocated to the premises of the Faculty of Medicine in Bucharest, where it acquired new dimensions by creating a library and a museum of normal and pathological anatomy.

In the surgical clinic, Professor Thoma Ionescu introduced rigorous aseptic techniques, removing all antiseptic methods, this being a European pioneer in a time when

all major surgery clinics were still practicing the old antiseptic methods.

To make known his work and his collaborators, Professor Thoma Ionescu founded in Paris in 1896 the journal „Archives des Sciences Médicales”, together with Prof. Victor Babes and Prof. Nicholas Kalinderu, with international collaborators, and in Bucharest he established the „Surgical Review”

His contributions have been numerous in the field of surgical arts. We merely present a few of them during this material. Thus, he made significant contributions to general surgery, to gynecology, orthopedics and neurosurgery.

An important aspect of surgical activity of Prof. Thoma Ionescu was the surgery of cervical sympathetic chain. Disregarding the results of experiments carried on animals by Claude Bernard, Brown-Sequard, Vulpian, etc. which seemed to be create a "noli me tangere" out of the cervical sympathetic chain because of the grim postoperative consequences, especially autonomic, after experimental resection, Professor Ionescu expanded surgery of the cervical sympathetic chain. Convinced at first that the simple section of the sympathetic chain or partial resection of a portion of it could not give satisfactory results in the illnesses for which it was addressed (Basedow disease, angina, glaucoma), from the first intervention, he extended the resection from the skull to the lower cervical ganglion.

In terms of neurosurgery, Professor Ionescu successfully practiced maxillary nerve interruption and Meckel ganglion resection, in a original surgical procedure, described together with Dr. Bruckner. Surgery consisted of 4 stages:

- Practicing a frontal-temporal-zigomatic skin flap
- Temporal muscle aponeurosis incision and cutting zygomatic apophysis

- Lateral orbital wall resection, anterior to the superior orbital fissure; then the maxillary nerve is found and traced to the round foramen, at which level it was sectioned

- Zygomatic arch and soft tissues suture [12]

A second type of intervention practiced by Prof. Thoma Ionescu followed optic nerve tumor ablation with preservation of the eye, through temporary resection of the external orbital wall, modifying the technique classically described by Krönlein.[12]

Also, Professor Thoma Ionescu imagined a personal approach for decompressive hemicraniectomies, with very favorable results. Perhaps the most famous surgical maneuver connected with the name of Thoma Ionescu is the practice of spinal anesthesia. It is his merit to popularize this method, initiated by August Bier in Germany and Theodore Tuffier in France in 1898.

Until 1908, spinal anesthesia was limited to surgery in the lower abdominal region, and any attempt to perform this technique at higher levels was considered an absolute impossibility (even by initiator of the method Tuffier, which in one report held in London at the 17th International Congress of Medical Sciences, concluded that general anesthesia is contraindicated in surgical interventions above the umbilical level).

Professor Thoma Ionescu, by his experiences and by long practice has made this concept disappear and showed that, in the hands of a gifted surgeon, puncture of the rachis at any point from the atlanto-occipital membrane and back to sacral vertebral level can be done without significant risk.[5] [6]

Regarding the instruments utilized, Professor Thoma Ionescu differentiate from the rest of the operators by using a needle with low profile gauge, almost identical to that used at the modern age. Anesthetic used was stovaine (a cocaine related substance, with a 3-fold lower toxicity) in combination

with strychnine (to overcome the effects of depression), and, later, with caffeine.[7]

In his first work, Professor Ionescu indicated three regions where he had practiced the spinal tap depending on the areas requiring surgery. Thus, the first location was mid-neck, between 3rd and 4th cervical vertebra, the second was cervical-thoracic, between the 7th cervical vertebra and first thoracic vertebra or between the first and second thoracic vertebrae, the third - thoraco-lumbar, between the 12th thoracic vertebra and first lumbar vertebra.

After sustained surgical experience and practice, the author was convinced that the midcervical puncture was unnecessary because the same anesthetic effects could be obtained in the cervico-thoracic junction case. Besides the location of thoraco-lumbar, Professor Ionescu also punctured lower lumbar region, between the 4th and 5th lumbar vertebrae.

Upper or cervical puncture was performed for surgical interventions aimed at the cephalic extremity, cervical region, brachial, antebrachial and hand region, and also on the upper chest.[8] [9] [10]

Thoraco-lumbar puncture was used for abdominal-pelvic surgery and pelvic limb.

For some interventions, however, aimed at the thoracic and pelvic level, Professor Thoma Ionescu used combined taps. Thus, for large interventions in the thoracic region he practiced 2 punctures: a cervical-thoracic and thoraco-lumbar, injecting 1 / 3 of the anesthetic dose at the upper level and 2 / 3 at a lower level. [10]

Surgery of the pelvic region, and especially in the sphere of gynecologic practice showed Professor Thoma Ionescu that thoraco-lumbar puncture did not completely anesthetised the lumbar plexus and traction sensitivity persisted. This problem has been overcome by using a double puncturing: first thoraco-lumbar level, and then the lower lumbar level, for each location using one half standard dose of anesthetic.



Figure 1 Cervical and thoracic spinal puncture



Figure 2 Thoraco-lumbar spinal puncture



Figure 3 Combined spinal puncture (cervical-thoracic and thoraco-lumbar)



Figure 4 Combined spinal puncture (thoraco-lumbar and mid-lower back)

Regarding benefits of spinal anesthesia method, they were in number three, after the author's experience:

- Conservation of gag reflex and facial muscle movements, the language of the larynx and pharynx, avoiding notable complications of inhaled anesthesia
- Full muscle relaxation of the perineum and pelvic memebrelor
- Cancellation of abdominal visceral reflexes

It is worth mentioning that Professor Thoma has conducted numerous demonstrations and surgical procedures using spinal anesthesia in London, New York at the Mount Sinai Hospital, in Philadelphia, at Pennsylvania Univesity, in Chicago and also in the Mayo Clinic. During these demonstrations, he was watched and praised, among others, by William and Charles Mayo and by the renowned neurosurgeon Charles Frazier.

As a recognition of his merits in advancing surgical science in 1909, was received at the White House by President William Howard Taft, who thanked him for his tireless work in his purpose of alleviating human suffering. The famous american newspaper „The New York Times” titrated on its first page in November 24-th, December 8-th and 17-th 1909 the following:

“Thomas Jonnesco, head of the Medical Department of the University of Bucharest, who has been demonstrating successfully here the use of stovaine as an anaesthetic, sailed for New York on the Krinprinzessin Cecilie on Wednesday on a brief visit at the invitation of a number of medical friends in America. Bucharest scientist demonstrates the value of Stovaine as an anaesthetic; 4 operations performed; the patients remain perfectly conscious although entirely

insensible to pain. Dr. Thomas Jonnesco, the famous scientist, was received by President Taft at the White House this morning. Dr. Jonnesco was introduced by Horace Knowles, American Minister to Nicaragua who, when he was Minister to Roumania, became a close friend of the distinguished surgeon. Dr. Jonnesco is in Washington as Mr. Knowles's guest and he has announced that he will hold no clinics while here His visit to the capital will end tomorrow, when he and his party will leave for Chicago.”[13]

In Romania, Prof.Toma Ionescu founded the periodicals “Archives Medicales des Sciences (1896), “Review of Surgery” (1897) and the Romanian Society of Surgery (1897). He was a member of the Academy of Medicine in Paris, the International Society of Surgery and Honorary Member of the Romanian Academy (1925).

Professor Thoma Ionescu passed away on March the 28-th 1926, leaving behind a huge surgical activity, taken and developed by his disciples, trained in the Topographical Anatomy and Experimental Surgery Institute at the Coltea Hospital.

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