

LETTER TO EDITOR

The Surgeon Benedetto Schiassi and the First Spinal Anesthesia in Italy

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Dear Editor,

The history of medicine reports that the first spinal anesthesia in the world was performed on August 16, 1898 by the German surgeon August Bier at the Royal Surgical Hospital of the university of Kiel. The surgical intervention performed was the resection of a tuberculous ankle joint in a 34-year-old laborer patient who had previously suffered severe adverse effects during general anesthesia. Bier's clinical decision consisted in the administration of cocaine at the lumbar spinal level, with the aim of anesthetizing only the lower limbs. The name given to it by the German surgeon was "cocainization of the spinal cord". The use of this new method was published by Bier himself [1]. The journal *Anesthesiology* recalled the event in 1998, underlining its relevance, success and widespread diffusion, in an editorial entitled "The Centennial of Spinal Anesthesia" [2].

In recent years careful research has allowed us to identify that it was the Bologna surgeon Benedetto Schiassi who performed the first spinal anesthesia in Italy. The day was December 27, 1899 and the location was the Umberto and Margherita Hospital in Budrio, his birthplace [3]. This date, in fact, marks the opening of the way towards the fundamental, promising and long-lasting experience of loco-regional anesthesia in Italy.

Schiassi, known especially for the surgical procedure of vagotomy in the peptic ulcer, also deserves a leading role in the affirmation of the discipline of anesthesiology, which at that time was still in an initial phase.

There are four of his publications that, combined with the documentation retrieved from the archive of the Budrio hospital, attest to the first execution of a surgical operation with spinal anesthesia. In the first article, undoubtedly the most important, published in the journal *Il Policlinico*⁴ (Figure 1), Schiassi reports having practiced this method in a patient, a 70-year-old man, who needed to be submitted to urgent leg amputation, as he was suffering from progressive and worsening gangrene of the right foot.

The Bologna surgeon describes the condition of the patient, formerly a heavy drinker, who presented arrhythmia, left ventricle dilatation and diffuse arteriosclerosis.⁵ His general clinical status, characterized by agitation, mental confusion, marked pain in the foot, dangerous toxic and infectious state, was so compromised that Schiassi considered general anesthesia extremely risky. At the time, the latter was in fact performed by inhalation with ether or chloroform and was associated with notable adverse effects and severe mortality if practised in critically ill patients.

The drug used was cocaine, universally considered the forefather of all local anesthetics, and already adopted in topical anesthetic procedure, for instance during eye surgery.

This peculiar type of anesthesia was successful, the patient was able to tolerate it and the amputation surgery was completed without any particular problems.

It should be remembered that Benedetto Schiassi used a dose of cocaine lower than that administered by

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Bier (1 cg. instead of 1.5), obtaining a loco-regional anesthesia that would allow him to perform the surgery while limiting the adverse effects reported by the German surgeon.

Schiassi reports that three minutes after intrathecal administration of cocaine it was possible to apply the Esmarch tourniquet and then perform the amputation in twenty minutes without the patient feeling any pain whatsoever. The postoperative course was without major complications.

Further confirmation of the Italian primacy of this method comes from two articles published by surgeons Raffaele Bastianelli [5] and Andrea Ceccherelli [6]. Both reports having performed spinal anesthesia and both cite Benedetto Schiassi's previous experience as their point of reference for the execution of this method.

The literature has not yielded any other documents, scientific research or curricula relating to other Italian surgeons to whom the execution of a spinal anesthesia could be attributed in a period prior to that performed by Schiassi.

We hope that this publication can serve to highlight the importance of this achievement and faithfully reconstruct the authorship of this anesthesia in Italy, its clinical context and the location where it took place,

underlining Benedetto Schiassi's innovative and far-sighted vision in understanding the theoretical value and clinical utility of this anesthesiological method, still widely used today, on the occasion of its 125th anniversary.

Conflicts of Interest: The authors declare no conflict of interest.

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