History and Career

Pablo Luis Mirizzi: Life and Legacy

Pablo Luis Mirizzi: Vida e Legado

Luiz Eduardo Correia Miranda*
Department of General Surgery, Oswaldo Cruz Hospital. Rua Arnóbio Marques, 310, Santo Amaro, Recife, PE, Brasil

Autor Correspondente/Corresponding Author:
Luiz Eduardo Correia Miranda [email: lecmiranda@gmail.com]
Department of General Surgery, Oswaldo Cruz Hospital. Rua Arnóbio Marques, 310, Santo Amaro, Recife, PE, Brasil. CEP: 51.100-130

https://doi.org/10.34635/rpc.1108

Keywords: Argentina; Biography; Cholangiography; General Surgery; History, 20th Century; Mirizzi Syndrome

Palavras-chave: Argentina; Biografia; Cirurgia Geral; Colangiografia; História do Século XX; Síndrome de Mirizzi

INTRODUCTION

Pablo Luis Mirizzi, an eminent Argentine physician of Italian heritage, bequeathed a profound legacy to the field of medicine and to his nation. He was born on January 25, 1893, and died on August 28, 1964, in Cordoba, Argentina. This city, situated in the province of Cordoba within the central-northern region of the nation, served as the locus of his entire life.

THE UNIVERSITY OF CORDOBA AT THE TIME OF MIRIZZI'S LIFE

Founded in 1573, Cordoba possesses a rich Spanish colonial heritage. By the dawn of the 20th century, Cordoba had evolved into a burgeoning urban center, significantly influenced by European immigration. This period was characterized by notable economic and cultural advancement, further augmented by the presence of the venerable National University of Cordoba, established in 1613, predating Harvard University in the United States of America, which was founded in 1636. Throughout the 20th century, Argentina experienced a series of profound political transformations, encompassing conservative, radical, and military administrations. Concomitantly, the nation's economic trajectory exhibited an initial phase of robust growth, succeeded by periods of recurrent crises and instability. It was within this complex historical and political milieu that Mirizzi, a distinguished surgeon, lived and practiced, leaving an indelible legacy to the field of medicine and to his country.[1,2]

Received/Recebido: 25/05/2025 **Accepted/Aceite:** 09/06/2025 **Published online/Publicado online:** 21/06/2025 **Published/Publicado:** 30/06/2025

Figure 1. Pablo Luis Mirizzi. Data sourced from the University of Buenos Aires, School of Medicine, Central Library, Dr. H. César Gotta Collection.

In 1918, the University of Cordoba became the epicenter of the University Reform, a student movement that profoundly transformed Latin American higher education. This reform championed principles such as university autonomy, student co-governance, and university extension, which subsequently became cornerstones of regional higher education.

FROM UNIVERSITY TO ACADEMIA: LAUNCHING HIS ACADEMIC CAREER"

Mirizzi, born into a modest family typical of Italian immigrants arriving in the Americas, was sponsored by a compatriot, enabling him to pursue medical studies at the University of Cordoba, where he dedicated his life to surgery and teaching, graduating as a physician in 1915. He witnessed the significant mortality associated with post-operative infections, prevalent before the widespread adoption of Listerian aseptic protocols.[2,3] In the ensuing years, amidst the global upheaval of the Spanish flu pandemic, the Russian Revolution, and the aftermath of the Great War, Mirizzi, with the support of the Cordoba provincial government, traveled to observe leading surgical services and surgeons in the United States and Europe.

During the period of university reform in Cordoba, Mirizzi declined an offered professorship. At the age of 25, he accepted an appointment as Assistant Professor of Surgery at his alma mater, where he focused his efforts on surgical practice.[2-4] In 1926, he achieved the position of Professor of Surgery at the University of Cordoba through a competitive examination. In 1942, he was appointed Director of the Institute of Clinical Surgery in Cordoba. He was named Honorary Professor in 1955, and in 1956, the Argentine Society of Surgeons bestowed upon him the title of Master Surgeon. Mirizzi was renowned for his refined surgical technique, meticulous patient care, and compassionate treatment.[2-5]

MIRIZZI'S LEGACY TO MEDICINE

Mirizzi is distinguished by his significant contributions to surgical practice, most notably his pioneering work in two areas of global renown. Firstly, he introduced intraoperative cholangiography: The inaugural intraoperative cholangiogram was performed in Cordoba in 1931. At a time when biliary surgery was confined to laparotomic cholecystectomy, conducted without the sophisticated amenities of contemporary operating theaters, during an era characterized by rudimentary anesthetic techniques and radiological investigations, devoid of the technological refinement prevalent today, and in the absence of antibiotic therapy, Mirizzi, then 38 years of age, innovated the technique of intraoperative cholangiography. This radiological examination, executed during biliary surgery, provided indirect visualization of the bile ducts for the detection of cholelithiasis, which, until that juncture, could only be definitively diagnosed intraoperatively via surgical exploration of the common bile duct. The resulting image, while reflective of the technological limitations of the period, reveals a rudimentary, yet discernible, depiction of the common bile duct, demonstrating normal caliber, absence of lesions, and limited visualization of the intrahepatic biliary tree. Mirizzi's innovation drew upon the antecedent work of Carnot and Blamoutier in 1921. These authors demonstrated a radiographic visualization of the common bile duct achieved through the instillation of a barium solution. Intraoperative cholangiography, as pioneered by Mirizzi, has revolutionized biliary surgical practice, enabling the precise identification and management of bile duct lesions during operative procedures. Briefly, the technique entails the instillation of a small volume (7-10 mL) of iodinated contrast medium via a catheter inserted into the cystic duct. A preliminary radiograph is obtained before contrast administration, followed by a second radiograph immediately post-instillation, and a third image after three minutes, facilitating the evaluation of common bile duct emptying.

Intraoperative cholangiography maintains its contemporary relevance and clinical utility, even amidst the availability of non-invasive preoperative imaging modalities such as magnetic resonance cholangiopancreatography, particularly in surgical scenarios where previously unsuspected common bile duct lesions or choledocholithiasis are suspected.[3-7] Mirizzi's second enduring legacy is the description of Mirizzi syndrome: In 1940, amidst the backdrop of the Second World War, he delineated Mirizzi syndrome, a complication of cholelithiasis characterized by extrinsic compression of the common hepatic duct by an impacted calculus within the cystic duct or gallbladder neck. This syndrome can precipitate biliary obstruction, inflammation, and other grave sequelae. It is acknowledged that Mirizzi was not the first to document this particular complication of biliary disease. In 1948, Mirizzi published the seminal article that would lend his name to the eponymous clinical syndrome characterized by a gallstone-induced compression of the common hepatic duct, resulting in obstructive jaundice. In that era, Mirizzi syndrome was frequently an incidental intraoperative discovery. It is pertinent to note that this occurred less than eight decades ago. Currently, Mirizzi syndrome is often diagnosed through preoperative imaging modalities and may be managed via minimally invasive interventions.[2,3]

MAIN PUBLICATIONS BY PABLO LUIS MIRIZZI

1932 – *La colangiografía durante las operaciones de las vías biliares* (Cholangiography during biliary tract operations): Presented to the Surgical Society of Buenos Aires, this work represents an early landmark in which Mirizzi introduces the technique of intraoperative cholangiography, a method for visualizing the biliary tract and identifying calculi or other anomalies during the surgical procedure.

1937 – Operative Cholangiography: Published in the journal Surgery, Gynecology & Obstetrics, this English-language article was instrumental in disseminating his technique to the international medical community.

1938 – Operative cholangiography. Its contribution to the physio-pathology of the common bile-duct: Another publication in the influential English-language journal, The Lancet, detailing the pathophysiological aspects revealed by his technique.

1939 – *Fisiopatología del hepato-colédoco. Colangiografía operatoria* (Pathophysiology of the hepatic and common bile duct. operative cholangiography): This book, one of his most comprehensive works, details the pathophysiology of the common hepatic duct and the common bile duct, consolidating intraoperative cholangiography as an essential diagnostic tool.

1940 – Physiologic sphincter of the hepatic bile duct: Published in the Archives of Surgery, this article describes what he posited to be a functional sphincter in the hepatic duct, making a significant contribution to the understanding of biliary physiology.

1948 – *Síndrome del conducto hepático* (Hepatic duct syndrome): Published in the *Journal International de Chirurgie,* this is the seminal paper in which he describes the clinical condition of common hepatic duct obstruction caused by a calculus impacted in the cystic duct or the gallbladder's infundibulum. This condition would become known worldwide as Mirizzi's syndrome.

1952 – *Les fistules bilio-biliaires internes spontanées* (Spontaneous internal biliobiliary fistulas): In this work, published in the *Journal de Chirurgie*, he explores biliobiliary fistulas, one of the complications arising from the condition he had previously described.

Mirizzi resided and practiced within a nation marked by a tumultuous political trajectory, during an epoch when even rudimentary analog long-distance telephony posed significant challenges. Though not a war combatant, he navigated the vicissitudes of his time. He operated without the technological infrastructure we now consider commonplace, yet within these constraints, he bequeathed a remarkable medical legacy. He succumbed to acute pulmonary edema, a consequence of chronic heart failure, at his residence.[5,6] In his testamentary dispositions, he left a rich cultural collection that included a collection of paintings, sculptures and his personal library to museums and the city of Cordoba itself. Furthermore, he mandated the creation of a foundation dedicated to affording newly qualified physicians the same opportunity he enjoyed in his youth: to engage in international scholarly travel, observing renowned medical services and refining their expertise. The Pablo Luis Mirizzi Foundation persists to this day, fulfilling its mission with fidelity. Mirizzi is buried in the San Jerónimo cemetery, within the family mausoleum in Cordoba.[5-6,11]

ETHICAL DISCLOSURES

Conflicts of Interest: The authors have no conflicts of interest to declare.
Financial Support: This work has not received any contribution grant or scholarship.
Provenance and Peer Review: Not commissioned; externally peer-reviewed.

RESPONSABILIDADES ÉTICAS

Conflitos de Interesse: Os autores declaram a inexistência de conflitos de interesse.
Apoio Financeiro: Este trabalho não recebeu qualquer subsídio, bolsa ou financiamento.
Proveniência e Revisão por Pares: Não solicitado; revisão externa por pares.

REFERENCES

1. Romero LA. A History of Argentina in the Twentieth Century. Pennsylvania: Pennsylvania State University Press; 2002.
2. Leopardi LN, Maddern GJ. Pablo Luis Mirizzi: the man behind the syndrome. ANZ J Surg. 200777:1062-4. doi: 10.1111/j.1445-2197.2007.04325.x.
3. Beltrán MA. Mirizzi syndrome: history, current knowledge and proposal of a simplified classification. World J Gastroenterol. 2012;18:4639-50. doi: 10.3748/wjg.v18.i34.4639.
4. Martinez Marull A, Esteban Granero L. Pablo Luis Mirizzi. Acta Gastroenterol Latinoam. 2009; 39:177-8.
5. Martínez Marull A. Vida y obra de Pablo Mirizzi / Life and work of Pablo Mirizzi. Prensa Med Argent. 2009;96:126-30.
6. Pablo Luis Mirizzi (1893-1964). Bull Soc Int Chir. 1964;23:479-81.
7. Mirizzi PL. Physiologic sphincter of the hepatic bile duct. Arch Surg. 1940;41:1325-33.
8. Mirizzi LP. La colangiografía durante las operaciones de las vías biliares. Comunicación en la Sociedad de Cirugía de Buenos Aires. 5 de octubre de 1932.
9. Mirizzi PL. Sindrome del conducto hepatico. J Int Chir. 1948;8:731-7.
10. Mirizzi LP. Fisiopatología del hepato-colédoco. Colangiografía operatoria. Buenos Aires: El Ateneo; 1939.
11. Acerbi N. A 60 años de la muerte del Prof. Pablo Luis Mirizzi. Panteón familiar en el Cementerio San Jerónimo. Rev Fac Cien Med Univ Nac Cordoba. 2024;81:453-7. Spanish. doi: 10.31053/1853.0605.v81.n3.46246.