GYNECOLOGY AND OBSTETRICS AN THE PERUVIAN BICENTENNIAL

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# Notes for the history of Obstetrics and Gynecology in Peru

# Apuntes para la historia de la Obstetricia y Ginecología en el Perú

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**ABSTRACT**

Gynecology and Obstetrics has a history of very ancient roots in Peru, rich in transcendent milestones, thanks to the intelligence, talent and tenacity of numerous doctors who contributed to the formation of the scientific and academic body that today represents an important part of Peruvian medicine. The purpose of this article is to make a synthesis of that interesting and profitable history for the memory of Peruvians in general and of the national medical order in particular.

Key words: Gynecology; Obstetrics; Peru, History of Medicine.

**RESUMEN**

La Ginecología y Obstetricia tiene una historia de raíces muy antiguas en el Perú, rica en hitos trascendentes, gracias a la inteligencia, talento y tesón de numerosos médicos que contribuyeron a formar el cuerpo científico y académico que hoy constituye parte importante de la medicina peruana. El objeto de este artículo es hacer una síntesis de aquella interesante y proficua historia para la memoria de los peruanos en general y de la orden médica nacional en particular.

Palabras clave. Ginecología, Obstetricia, Perú, Historia de la Medicina.

## Introduction

The limited space of an article does not allow us to narrate in its entirety such a rich history as that of Obstetrics and Gynecology in Peru, this shortcoming will be compensated with a thorough and documented research on the main events that took place from pre-Columbian times to the present.

## 1. Pre-Columbian period

The art of Obstetrics is probably one of the oldest among humans; necessity contributed to its creation, humble in the beginning and intimately related to abortion, infections and death, since it was believed that the body of the parturient had been taken by strange spirits as a consequence of the sins committed[1].

Information on the practice of obstetrics in ancient Peru has been built based on oral tradition, the persistence of certain ancestral customs and practices[2], and the references left by some Spanish chroniclers during the time of the conquest. From those sources it is known that in the pre-Hispanic world the practice of medicine in general and obstetrics in particular, were inseparably related to the particular worldview of the universe that each native people had built, which were fundamentally polytheistic and pantheistic[3].

With certain nuances, medicine had a magical-religious nature[3], which explains why, since pre-Inca times, pregnant women used to implore the gods of the huacas and the hills for a good delivery, considered the earth as their protector and offered animal sacrifices, the burning of objects and even offered maidens[1]. When the time came to give birth, the shaman or sorcerer was called to make offerings to the idols of the family, which were placed on the breasts of the laboring woman, who

begged for their help, showing great stoicism in the face of physical pain[1].

The Inca Garcilaso de la Vega relates the details of childbirth and the great happiness that caused its successful completion, the umbilical cord was cut and kept with great care and the child was made to suck in case of a future indisposition, meanwhile the newborn was washed with cold water and almost immediately the woman returned to her daily work, as if nothing had happened[1].

The twin pregnancy was known, called *Chuchus* or *Taquihuahua*, whose presence was attributed to a sin of the mother, and the podalic presentation was also described, called *Chacpas*, in both cases penances and sacrifices were necessary[1]. The Inca Pachacutec prohibited induced abortion and established severe penalties for those who practiced it[1].

## 2. Colonial Period

The conquest of the Inca Empire by the Spaniards provoked a violent encounter between these two cultures, whose worldview of the universe was diametrically different. However, the use of force made the European perspective prevail in the different spheres of life; everything that came from the original inhabitants was scorned and even proscribed and persecuted, as happened with the pre-Hispanic medical conception, making it inevitable that the knowledge accumulated over centuries, were relegated and considered as simple sorcery or superstitions without any support[3].

The training of our physicians took place at the Royal University of San Marcos, officially recognized by the Royal Decree of May 12, 1551, which extolled superficial rhetorical erudition and knowledge of theology rather than anatomy and physiology, which resulted in the discrediting of the medical profession and the consequent proliferation of charlatans throughout the viceroyalty[3].

Obstetrics was still seen as a minor branch of medicine, inferior to surgery and phlebotomy[4], and there was no formal teaching during the colonial period[5], so it was usually left in the hands of women without any instruction and who therefore used to practice it at their own free will, by virtue of which empiricism remained as the "sole sovereign" in the obstetric art[6]. Valdizán refers that in Lima there were Spanish and Peruvian doctors who satisfactorily practiced the art of obstetrics in the XVIII century, but "they tried to carefully hide everything that could constitute a secret of their professional success"[7].

The complications of childbirth and maternal mortality reached chilling levels in the American colonies of Spain, to such an extent that King Charles III provided, in 1781, a Royal Decree establishing the rules to which surgeons should be subject to perform cesarean sections[8].

That same year, the priest Francisco Antonio Gonzales de Laguna, theologian, botanist, historian, judge, consultant and qualifier of the Holy Office residing in Lima, published his work *Zelo sacerdotal para los niños no nacidos* (Priestly zeal for unborn children), where he praised the cesarean section, pointing out the signs of maternal death, which once proven, the surgery should be performed, detailing such procedure[9]. He also described abortion and the rules to avoid it; he criticized mothers who did not breastfeed their children, considering that it was one of the major causes of infant mortality; and he was the first to mention ectopic pregnancies and the high frequency of uterine cancer[9].

In spite of what has been described, there is no evidence that cesarean section was practiced in colonial Peru. One of the few references appeared in the Mercurio Peruano, on December 19, 1794, described a cesarean section performed in Tucumán, viceroyalty of La Plata, on a mother who died as a result of a lightning strike and the child, although born alive, died a few minutes later[4,10].

Two articles of obstetric interest had also been published in that journal: *Descripción anatómica de un monstruo* (1791), which dealt with a neonate "who lacked an entire brain", i.e. a case of anencephaly[11], and On a nine months old fetus which was drawn out of a woman by the urine duct in the year 1779 (1792)[12].

In 1797, the mulatto from Lima José Manuel Dávalos graduated from the Medical School of Montpellier, France, with the doctoral thesis Las enfermedades reinantes en Lima y su método de curación, in whose chapter IX he described the pathologies of pregnancy and childbirth,

dealing with infantile tetanus, eclampsia gravidarum, prophylaxis and management of childbirth, making precise indications on the section of the umbilical cord, the administration of colostrum to the newborn as an effective means for the expulsion of meconium and the rules of hygiene applicable to newborns[6], and also recommended that in blenorrhagia, amenorrhea, childbirth and during the period of lochia, the cutting of a vein in the arm should be performed as a therapeutic measure[9].

A pathology that due to its frequency and lethality deserved the attention of viceroyalty physicians was breast cancer, called zaratan at that time, and several exuberant and deadly cases were reported, as well as speculation about its origin and even some miraculous cures were described[4].

Dr. José Hipólito Unanue y Pavón (b.1755-d.1833) (Figure 1), genuine founder of modern medicine in Peru, achieved the construction and operation of the Anatomical Amphitheater of the Hospital de San Andrés, inaugurated in November 1792, and then the establishment of the Royal College of Medicine and Surgery of San Fernando, in 1808[3]. Unanue introduced Obstetrics in the national medical instruction, by including the course of Anatomical, Surgical and Medical Obstetrics in the first curriculum or Synoptic Chart of San Fernando[3].

Figure 1. Doctor José Hipólito Unanue y Pavón (b.1755-d.1833). Image inserted in volume VI of the collection Documentos Literarios del Perú by Manuel Tiburcio Odriozola. Imprenta del Estado, Lima 1874.

Unfortunately, due to the lack of "a critical mass of professors that would disrupt the old system of teaching and health", this project was never fully implemented and the course was never established[13]. However, this would not be the last time that Unanue showed his concern for Obstetrics, later on, at the dawn of our independent life, he inspired the foundation of the Maternity Home in Lima.

Meanwhile, the native population, generally isolated from European culture, continued with their ancestral practices regarding pregnancy and childbirth, many of which survive to this day in some communities of our highlands and jungle[2].

## 3. Republican Period

The emancipation of Peru, which occurred after the victory in Ayacucho, on December 9, 1824, did not change the situation of our obstetrics, even tended to worsen by the chaotic scenario that took place after our independence and that extended throughout the first decades of the Republic, due to the First Militarism, a period in which senior army officers fought for power without pause until 1872, ending up ruining the country[3].

### 3.1. XIX Century

The history of the specialty in Peru during the 19th century is dominated by the creation and development of the Maternity Hospital of Lima and the San Fernando School of Medicine, and the establishment of the Chair of Gynecology in that school.

#### 3.1.1. Foundation of the Lima Maternity Home

Unanue achieved his long-standing desire to redeem our Obstetrics, through the promulgation of the decree of October 10, 1826, signed by General Andrés de Santa Cruz, President of the

Council of Government, founding the Maternity Home of Lima and its annexed school[3]. This was one of the last public activities of the wise man from Arica, who that year retired from politics and began a voluntary exile in his haciendas in the valley of Cañete, where he remained until shortly before his death[14].

The aforementioned decree established the hiring of Benita Paulina Cadeau de Fessel (b.1792-d.1837), a competent French obstetrician who would be in charge of its direction[7]; however, the fall of the Bolivarian regime and the exaltation to power of General José de la Mar, made the new ruler issue a new decree, on October 5, 1827, which reiterated the purpose of the device that preceded it[7].

Madame Fessel, who had arrived in our country from Mexico in 1826, shortly before the promulgation of the decree inspired by Unanue[15], dedicated herself tenaciously to erecting the Maternity Hospital and the school that would be attached to it, at the same time as creating the proper social climate to elevate the art of childbirth from the humble category in which it was cloistered to the rank of scientific subject[8]; to fulfill this complex task she was assigned an annual income of 3,600 pesos[16].

On October 18, 1826[17] the French matron established a modest birthing clinic in the old Hospital of the Holy Spirit[8], a hospital founded in 1573, originally dedicated to the care of sailors and that occupied the extensive lot whose front faced the street of the same name, which in contemporary Lima corresponds to the fifth block of Callao Street[3]. There they remained until 1830, when they were transferred to the Hospital de Santa María de la Caridad, in the current Plaza del Congreso, beginning the long institutional pilgrimage that lasted for more than half a century[3].

In 1836, Mrs. Fessel decided to return to France for health reasons, which was a hard setback for the Maternity and the College, whose direction was entrusted to Dr. Francisco Faustos (b.1770-d.1850), who had been working at the Hospital de Santa María de la Caridad since 1816[18]. In 1841 they were transferred to the nearby Hospital Santa Ana[3], where they entered in frank decadence, which was evidenced in the report written on July 15, 1847 by José Manuel Pasquel, at the request of the Sociedad de la Beneficencia de Lima (SBL), in which he affirmed that in practice both had ceased to exist, being necessary to "request and even beg some young women to dedicate themselves to the learning of this interesting art"[18].

In view of this terrible situation, that same year, the SBL agreed to establish a new Obstetrics School, which would replace the one that had disappeared, and to clearly delimit the Maternity sector within that hospital[19].

### 3.1.2. Creation of the San Fernando School of Medicine

In August 1821, the Royal College of Medicine and Surgery of San Fernando, by virtue of the order of General José de San Martín, was renamed the College of Independence, with the purpose of eliminating any memory of the Spanish regime, since that name was given in homage to King Ferdinand VII. This corporation languished academically to the point that its rector, Dr. José Cayetano Heredia, believed that it was essential to create a different one, from the design of its organization and curriculum to the role it had to play in the development of our medicine.

In 1848, the course of Obstetrics began to be taught at the Colegio de la Independencia, which was put in charge of Dr. Francisco Faustos, who was the first to do so, when such a subject was not yet among the subjects of the curriculum[20]; exercising this chair until his death in 1850[21].

In 1851, Heredia chose his best alumni and sent them on scholarships to Paris (France), with the purpose of learning the modern tendencies of medicine and the organization of its teaching, so that upon their return they would be part of the new corporation desired by Heredia, among them was Camilo Segura who was instructed in surgery and obstetrics at the University of the Sorbonne; returning, along with the others, in 1853[22].

On September 9, 1856, the San Fernando School of Medicine was founded as part of the Universidad Mayor de San Marcos (UNMSM), whose first dean was Heredia, with Segura as the founding professor of the External Clinic and Childbirth course[18]. Since then, Obstetrics was formally taught to the students of that faculty in the same

way as it had been done, since 1826, with the students of the College of Childbirth, now both in charge of Segura[3].

### 3.1.3. Refoundation of the Maternity Hospital of Lima by Dr. Camilo Segura

In 1848, Camilo Segura had been appointed by the SBL as director of the Casa de Maternidad and the Colegio de Partos, which at that time operated inside the Hospital Santa Ana[8]. Upon his return from Europe in 1853, he took over the direction of both establishments and under his leadership an era of profound innovation in our Obstetrics was consolidated, implementing a set of techniques and measures in accordance with the advances of the time, which substantially reduced maternal and perinatal morbidity and mortality[18], particularly puerperal fever, a terrible scourge since ancient times and whose etiology would be defined years later by Louis Pasteur[23]. This constituted the re-foundation of the Maternity Hospital of Lima, as we know it to this day.

In 1857, the SBL decided to move both entities to the old premises of the Recogimiento de Amparadas, today headquarters of the Escuela Nacional Superior Autónoma de Bellas Artes del Perú, in the sixth block of the jirón Ancash in the Cercado de Lima; there they opened their doors to the public on July 1st of that year[20]. In that Maternity Hospital, in 1861, the first postmortem cesarean section of our medical annals was performed on an indigenous woman who died during labor, the fetus still showed signs of life, but when it was removed, death was verified[3,4]. Although the name of the surgeon has not been documented, everything seems to indicate that it was Segura[24].

Sadly, that physician died on October 24, 1863, due to a chronic pulmonary ailment that had afflicted him for some time[22], being substituted by Dr. José Pro who resigned just the following year. In such circumstances Dr. Rafael Benavides Roa (b.1832-d.1915) was appointed (Figure 2), who on August 8, 1866 would be appointed founding professor of the new chair of named Puerperal and Child Diseases in the Faculty of Medicine of San Fernando[25].

This famous obstetrician from Lima, who years later would be the maternal grandfather of

Figure 2. Doctor Rafael Benavides Roa (b.1832-d.1915). Photo Eugene Courret Studio, Lima, 1893.

Ramón Rafael de la Fuente Benavides, better known as Martín Adán[3], was able to continue Segura's prolific work, as is supported by various reports and statistics of the time.

In 1885, Dr. Samuel García (b.1846-d.1931) (Figure 3), began to provide care in the "Free Clinic for Pregnant Women" of the Maternity Home, which was the first prenatal control service that existed in our country; this doctor developed this activity with certain irregularity for three decades until 1915[18]. Garcia, during the Pacific War, had enlisted with the rank of captain of the national armies in the Reserve Battalion No. 36[26].

### 3.1.4. The Chair of Gynecology at the San Fernando Medical School

Gynecology in Peru began to take on a face of its own in the first decades of the Republic. However, its surgical aspect began its true impulse with the advent of anesthetic procedures, which arrived in Peru in 1847[27], and antisepsis, which began to be practiced in the 1860s[28].

A transcendent event occurred on June 12, 1878, when Dr. José Lino Alarco performed the most daring act of his successful career, operating at home on an ovarian cyst, which was our first successful intraperitoneal surgery; the general

Figure 3. Doctor Samuel García (b.1846-d.1931). Unknown photographer. Circa 1900.

anesthesia with chloroform was administered by Manuel Odriozola and Tomás Salazar[28]. The intervention, which lasted a little more than two and a half hours, was concluded leaving the drainage for the removal of the metallic loop that held the ovarian pedicle for several days, as was then the custom[28].

Seventeen years later the chair of Gynecology was created, during the regime of Nicolás de Piérola, by the law of December 27, 1895. However, the controversy between the president and his Minister of Instruction prevented him from being appointed professor[29].

The whole of 1896 passed without the government making a decision on the matter. However, the problem was unraveled when Dr. Manuel Pablo Olaechea left his position as minister; this settled the controversy in favor of Dr. Tendulio Constantino Carvallo Loli (b.1853-m.1920) (Figure 4), who from the beginning was Piérola's candidate[29]. The Supreme Resolution of June 19, 1897 named him as founding professor of that chair[30].

In order for this course to be really profitable, it was necessary to provide it with the appropriate facilities, so the Dean of San Fernando officiated to the SBL requesting the cession of some rooms of the Santa Ana Hospital[29]. The SBL gave him a room occupied by the "chronic patients" and two adjacent corralitos, which Carvallo visited

Figure 4. Doctor Tendulio Constantino Carvallo Loli (b.1853-d.1920). Photo Courret & Cia, Lima, 1904.

and projected the indispensable modifications. Thus, on July 22, 1897, he elevated a detailed report to the inspector of that hospital[29].

The works had a cost of 2,178 soles. There arose the first great inconvenience, since the SBL only delivered 651 soles, but Carvallo was not willing to be deterred, and gave the salaries of a whole year that corresponded to him as professor of Gynecology, which added up to 1,200 soles[29].

The works began in March 1898, and from the first day Carvallo supervised them directly so that they would adhere to what was detailed in his technical report, and once concluded, in July of that year, he sent a detailed report to the dean of San Fernando. The new service was baptized with the name of Nuestra Señora de la Merced[29].

The operating room installed there must be considered as the first one in our country that complied with the technical specifications of modern surgery. Before, the conditions in which surgery was performed in our hospitals used to be precarious, which meant a great risk for the health and life of the patients; even many surgeons preferred to operate on their private clientele in the homes of each patient[29].

In that precinct, national surgery was revolutionized, particularly gynecological and obstetric surgery, since for the first time all the asepsis procedures known up to that time were applied, instruments were sterilized before each procedure, hand washing was established prior and mandatory to the interventions, and the use of rubber gloves and face masks was generalized[29]. Surgeons of the stature of Eduardo Bello Porras, Pablo S. Mimbela and Miguel Cecilio Aljovin were trained there[20].

New surgical techniques were also introduced, such as Mickuliz drainage, peritonization, the Doyen procedure for the removal of uterine fibroids and even a novel method for performing abdominal hysterectomy, which was modified and perfected by Carvallo himself, clearly differentiating it from the so-called American Kelly technique[4].

The inaugural lesson took place on August 17, 1898, and the statistics of the first year of work, between August 17, 1898 and the same date of the following year, revealed that a total of forty surgical and medical procedures of the most diverse nature had been performed, although most of them could be considered relatively simple for a current spectator; their results were quite flattering, since thirty-six patients had achieved cure or a significant relief of their ailments, and only the remaining four had died[31].

### 3.1.5. The practice of the specialty in the rest of the country

In the rest of the country, the obstetric art continued to be practiced almost exclusively by midwives, whose empirical skills were extremely heterogeneous, most of them lacking the elementary knowledge to face the complications of pregnancy and childbirth, as well as lacking the most basic hygiene, with serious consequences for the parturient and the newborn.

However, in some of the main cities of the country there were Peruvian and foreign physicians who practiced obstetrics following the scientific guidelines accepted at the time. An emblematic case was the San Juan de Dios Hospital in Arequipa, founded in colonial times and extinguished in 1912, in whose last years of existence doctors Pedro José Ramírez Broussais, an obstetrician trained in Europe, and Benigno Ramírez del Villar, an obstetrician trained in Germany[4], worked there.

## 3.2. 20th Century

The first half of the 20th century was marked by the prolific work of Dr. Enrique Febres Odriozola, who achieved the institutional autonomy of the Lima Maternity Hospital and the founding of the Peruvian Society of Obstetrics and Gynecology (SPOG). In the second half of this century, San Fernando lost its monopoly on medical education, with the appearance of other faculties in which gynecology and obstetrics would be taught at the undergraduate level, and the subsequent implementation of the second specialization, better known as the medical residency.

### 3.2.1. Enrique Febres Odriozola and the autonomy of the Lima Maternity Hospital

In 1909, Dr. Enrique Febres Odriozola (b.1875-d.1948) (Figure 5), became the head physician of the Lima Maternity Hospital, which at that time continued to function as a service of the Santa Ana Hospital[18].

In those early years of the 20th century, the definitive steps were taken to establish the cesarean section among us. Curiously enough, this would

Figure 5. Doctor Enrique Febres Odriozola (b.1875-d.1948). Unknown photographer, 1919.

happen outside that Maternity Hospital: on May 31, 1900, Alberto Barton, then an intern at Santa Ana Hospital and who years later would discover the etiological agent of Carrion's Disease, performed such a procedure on a deceased pregnant woman and extracted a child who survived, this happy result being the first in our medical annals. And almost ten years later, on May 2, 1910, Dr. Belisario Sosa Artola (b.1878-d.1952) (Figure 6) performed the first corporal cesarean section in which the mother and child survived; this operation was performed at the Hospital San Juan de Dios del Callao[21].

Thanks to Febres' efforts, on November 26, 1915, the SBL approved the financing for substantial improvements in the Maternity Hospital, which was confirmed by the Supreme Resolution of December 23 of that year[18]. Such works were carried out in 1916, which forced the patients to be transferred to the then Hospicio de San Andrés, the name given to the premises of the extinct hospital of the same name[3].

Figure 6. Doctor Belisario Sosa Artola (b.1878-d.1952), at the old racetrack of San Felipe, Lima. Photographer unknown. 1940s.

In 1917, the Maternity Hospital had five wards: San Ramón was for patients in labor; San Camilo was for parturients with some pathology or who required surgery; and Santa Filomena, Nuestra Señora del Carmen and Virgen de Lourdes were for uncomplicated parturients[18]. In October 1921, the SBL appointed Febres as director of the Maternity Hospital, who from that moment on had simultaneous operational, administrative and academic authority, which made it possible to achieve its most cherished desire: institutional autonomy[3].

The first step towards this objective was the foundation of the Obstetric Gynecological Institute inside the Maternity Hospital, inaugurated on December 31, 1922[18], which was a highly specialized entity that would offer its services in exchange for a modest fee, being the first time that an attempt was made to attract pregnant women from all social strata, since historically the establishment served mainly the less favored classes of Lima and its surroundings. Part of the income from this brand new institute would be used to support the Maternity Hospital, which continued to be free of charge[3]; this contributed to the installation of an Incubator Room in the Maternity Hospital, also inaugurated in 1922, being the first one in our country, which was a true milestone in national neonatology[18].

The end of the construction of the Hospital Arzobispo Loayza, at the end of 1924, destined to replace that of Santa Ana, was the propitious occasion for Dr. Febres to negotiate before the SBL the establishment of the Maternidad de Lima as an autonomous organization in the building that would leave the extinguished hospital; as it happened[3].

In 1927 there was a serious disagreement between Febres and Lucas León, who was the inspector of the Maternity Hospital, due to the numerous observations made by the latter to the expense account of the establishment, which caused Febres to resign irrevocably from the direction, between the end of that year and the beginning of 1928; this also meant the extinction of the institute that he had founded in 1922[3].

In this hospital, during the first half of the 20th century, some milestones of the specialty took place, such as the first successful segmental cesarean section in our medical history, performed by Dr. Victor Manuel Bazul Fonseca (December 22, 1937), in a 15 year old teenager and 1.38 meters tall, who later became pregnant again, being tributary of a similar procedure (May 30, 1940)[24]; the cesarean section of the girl Lina Medina Loza (figure 7), who was only five years, seven months and twenty-one days old, which made her the youngest mother in the history of the world, being operated by doctors Gerardo Lozada Murillo and Alejandro Bussalleu Herrera, acting as anesthesiologist Dr. Rolando Colareta Landa (May 14, 1939)[27]; and the first complete exsanguineous transfusion in the national medical annals, which was applied in a neonate suffering from hemolytic disease of the newborn; this procedure was carried out with the collaboration of the blood bank of the Hospital Dos de Mayo (June 19, 1949)[3].

### 3.2.2. Foundation of the Peruvian Society of Obstetrics and Gynecology

The modern development of obstetrics and gynecology had taken significant steps since the years following the war against Chile (1879-1883). In spite of this, by the mid 1940's there was no institution that grouped Peruvian physicians of this specialty, until Monday June 30, 1947, when the SPOG (for its acronym in English) was founded in the old premises of the Peruvian Medical Association Daniel Alcides Carrión, with the concurrence of twenty-four physicians[24].

The original associates elected Dr. Constantino José Carvallo Alzamora (b.1884-d.1952) (Figure 8) as their founding president[24], who was in charge of organizing the nascent SPOG, from the regulatory and administrative point of view, providing it with the institutional stability indispensable for its later development[32].

Figure 7. Dr. Hipólito Larrabure, director of the Maternidad de Lima, formally hands over Lina Medina Loza and her son Gerardo to Tiburcio Medina Medina and Victoria Loza, leaving the hospital that housed them with great care and affection. Photographer unknown. Friday, April 26, 1940.

Figure 8. Doctor Constantino José Carvallo Alzamora (b.1884-d.1952). Photograph Soriano, Lima. 1940s.

In September 1955, the first issue of the journal Gynecology and Obstetrics appeared, whose founding director was Dr. Lucas Molina Navia, who was accompanied by his colleagues Víctor Manuel Bazul Fonseca -associate director-, Roberto Gordillo Delboy -editor-in-chief-, Jorge Ascenzo Cabello, Eduardo Ponce Valdivia and Carlos Castellano -editorial secretaries-[33]. In 2006, this publication changed its name to Revista Peruana de Ginecología y Obstetricia (The Peruvian Journal of Gynecology and Obstetrics), and its director was Dr. José Pacheco Romero, who has directed it up to the present.

The I Peruvian Congress of Obstetrics and Gynecology, organized by the SPOG like all the others, was held in the city of Lima, between March 15 and 20, 1959[20] (Figure 9).

On June 19, 1998, at the request of SPOG, Ministerial Resolution No. 024-98-SA/DM was issued, signed by Marino Costa Bauer, then Minister of Health, which established June 30 as the Day of

Figure 9. Obverse and reverse of the commemorative medal of the I Peruvian Congress of Obstetrics and Gynecology. Lima, March 15-20, 1959. Manufactured at the Italian Society of Metal Articles (SIAM), Lima.


Peruvian Gynecology and Obstetrics, in memory of the founding date of this society[34].

It was re-registered in the Peruvian Medical College (CMP) by Resolution No. 5366-CN-CMP-2008, dated January 7, 2008, assigning it Re-registration Code No. 470630-SM-02 and the date of registration was January 9, 2008[34]. It is a member of the International Federation of Gynecology and Obstetrics (FIGO) and the Latin American Federation of Obstetrics and Gynecol-

ogy Societies (FLASOG)[34]. Its institutional headquarters are located at Andrés Aramburú Avenue No. 321, office 4, San Isidro district, in the city of Lima[34].

### 3.2.3. Emergence of new Faculties of Medicine and the introduction of the second specialization in Gynecology and Obstetrics

San Fernando had a monopoly on medical education in Peru from its foundation in 1808 until the mid-twentieth century, except for a brief period in the mid-nineteenth century, when the universities San Agustín de Arequipa (UNSA) and San Antonio Abad del Cusco provided such instruction[35].

This ended when the Faculty of Medicine of the UNSA began its academic activities on March 22, 1958, and a few days later, on April 1 of that year, the Faculty of Medicine of the National University of Trujillo (UNT) did the same[36,37]. In the following decade, medical teaching began at the Universidad San Luis Gonzaga de Ica (1961), the Universidad Privada de Ciencias Médicas y Biológicas, today Universidad Peruana Cayetano Heredia -UPCH- (1962), and the Universidad Nacional Federico Villarreal de Lima -UNFV- (1966)[37]. In all these faculties and those that appeared later, the undergraduate curricula, without exception, included theoretical and practical courses in gynecology and obstetrics.

Among the first teachers of gynecology at UPCH were Doctors Carlos Muñoz Torcello and Carlos Castellano, both principal professors, who were seconded by Doctors Manuel Chávarri Salas and Luis Pinillos Ganoza, as associates[20]. Manuel Gonzales del Riego, as main professor, his colleagues Félix Pérez Retes, Noé Ramírez Zapata and René Medina Llerena, as associates, and Manuel Gonzales del Riego Burga, as assistant professor[20].

In Peru, the studies to obtain the university degree of specialist were considered since 1928, in the University Statute promulgated by Law No. 6041, a prerogative that was only granted to the Faculties of Medicine and Law of the UNMSM[38]. In practice, the first one to be established was oncology, under the schooling modality at the National Institute of Neoplastic Diseases (INEN), which began in 1952[35]. San Fernando established anatomic pathology in 1957, and pediatrics and radiology in 1959[39].

In 1961, this university did the same with the Obstetrics residency, in the former premises of the Hospital Materno Infantil San Bartolomé, located in the ninth block of the jirón Antonio Miro Quesada, today Santa Rosa, in the Barrios Altos of Lima, under the direction of Dr. Abraham Ludmir Grimberg (b.?-m.2017) (Figure 10). As of 1964, this residency became Obstetrics and Gynecology[40], thus consolidating the unification of both into a single specialty, a process that had had its first antecedents in the 1920s[29].

In 1968, UPCH started a residency similar to that of San Marcos[41]. Over the years, residencies in this specialty began to develop in other hospitals in Lima and Callao, and also through other higher education centers, such as the UNFV, San Martin de Porres, and Ricardo Palma; This allowed the development of true schools of gynecology and obstetrics in the corresponding departments and/or services of the Hospital Arzobispo Loayza, Hospital Obrero de Lima -today Hospital Nacional EsSalud Guillermo Almenara Irigoyen (HNGAI)-, Hospital Central del Empleado -today Hospital Nacional EsSalud Edgardo Rebagliati Martins (HNERM)- and Hospital Nacional Daniel Alcides Carrión del Callao, among others.

Unfortunately, with rare exceptions, the historical beginnings of such services have been lost in the mists of time. One of the few exceptions is HNERM, whose Department of Gynecology, Obstetrics and Neonatology was inaugurated on November 3, 1958, although care began the day before. The first euthyroid delivery was attended by Dr. Cesar Burga Lang, the first cesarean section was performed by Dr. Victor Vargas Vicuña, who was the founding head of the Obstetrics service, and the first hysterectomy was performed by Dr. Américo Ballenas, as part of a cesarean section. Initially, this hospital had two Gynecology services, whose founding chiefs were Dr. Victor Vargas Vicuña and Dr. Froilán Villamon Haltenhof.

In the rest of the country, the UNSA and the UNT were the pioneers in the implementation of the second specialty in Gynecology and Obstetrics, which they initially developed in the Honorio Delgado Espinoza and Goyeneche hospitals in Arequipa, and Belén and regional teaching hospital in Trujillo, respectively. Subsequently, this teaching was extended to various cities where there was a School of Medicine and a hospital that met the minimum requirements for this purpose.

Figure 10. Doctor Abraham Ludmir Grimberg (b.?-d.2017). Tribute paid to him at the auditorium of the San Fernando School of Medicine. Lima, November 7, 2015.

In 1974, it had been approved that the second specialization in the country could be done in the schooled and non-schooled form[42]. In 2019, according to statistics from the Ministry of Health (MINSA), the nationwide deficit of obstetrician-gynecologists was 1,645, the largest of all the medical specialties recognized in the country[42]; moreover, it was evident that they were concentrated in the large cities, since there was no incentive to work in the socioeconomically depressed areas of the country. Also in 2019, the CMP, through National Council Resolution No. 250-CN-CMP-2019, created the National Registry of Sub-specialties[35].

### 3.2.4. Transcendental events and technological advances

During the 20th century, Peruvian gynecology and obstetrics were nourished by a series of technological advances that usually originated in developed countries, with very few exceptions, which allowed for substantial improvements in the precocity and quality of diagnoses, procedures, therapies and follow-up of various physiological and pathological processes.

#### Tests for the diagnosis of pregnancy

In 1928 the German gynecologists Selmar Aschheim and Bernhard Zondek developed the first scientific method for the diagnosis of pregnancy, although it was not 100% sensitive and specific[43]. In 1930, the Americans Maurice Harold Friedman, a researcher in reproductive medicine, and Maxwell Lapham, a gynecologist, devised a new method for such diagnosis, using virgin rabbits[44]. These tests had a very limited diffusion in our country; one of the few who used them was Dr. Enrique Febres Odriozola[35].

In March 1947, Carlos Galli Mainini, an Argentinean endocrinologist, published a description of a method for the early diagnosis of pregnancy[45], which used the Atenarium-Hensel bufo (*bufo arenarum*), a toad native to Argentina and Valle del Cauca, Colombia[44]. Sometime later, this technique began to be used as a routine assay in our

country. Even inside the San Fernando School of Medicine, a male toad nursery was installed for a certain period of time, which was very popular among students and other users[35].

In 1956, the Lima Maternity Hospital installed an animal vivarium to routinely perform the biological reaction for the diagnosis of pregnancy, mainly by means of the Galli Mainini technique[35].

In the 1960s, the first immunological tests for such diagnosis appeared, and it was not until the following decade that an assay was designed to identify and quantify the beta subunits of chorionic gonadotrophin, which began to be used in the country in the 1980s. Over the years, these laboratory techniques diversified and improved substantially in terms of sensitivity and specificity.

## Papanicolaou staining and early diagnosis of cervical cancer

Gynecological cytology began, strictly speaking, in 1943 with George Nicholas Papanicolaou. In the following years, the new method was widely accepted, perfected and disseminated worldwide, significantly modifying the early diagnosis of cervical cancer[46]. In Peru, this procedure began to be performed in the following decade and tended to become progressively more widespread starting in the 1960s.

In 1971, Gálvez reported that the incidence of this cancer was 59.5 per 100,000 women aged 20 years or more in the city of Lima, being the second most frequent cancer in general and the first among women[47]. Between 1985 and 1997, the INEN hospital registry reported 13,491 cases of this pathology, which represented an average of 1,124 cases per year; the Cancer Registry of Metropolitan Lima, between 1990 and 1993, found 2,263 cases, which meant an age-standardized rate of 26.15 per 100,000; and in 2000, the International Agency Against Cancer (IARC) calculated the number of new cases of invasive cervical cancer at the national level at 4,101 and 1,213 for Metropolitan Lima[48].

Statistics from subsequent years showed that this pathology continued to be a serious public health problem in Peru, despite the simplicity of the Papanicolaou technique, since national coverage was not sufficient, there were not an adequate number of obstetrician-gynecologists to take the samples correctly and there were not enough anatomic pathologists to perform the appropriate reading.

## Contraceptive methods

In 1880 the North American Samuel Smith Lungren performed the first bilateral tubal occlusion to achieve definitive sterilization. Since then more than one hundred different techniques have been described[49]; such procedures would begin to be performed in the country since the 1930s, usually within the operative act of cesarean sections.

Cheap and effective contraceptive methods were scarce in Peru at the beginning of the 20th century; physicians rarely discussed their availability or relevance to people's lives; however, since the early 1880s the use of pessaries and condoms had been recorded among women and men in Lima[50]. In the early 1920s, Limeños actively used condoms to limit family size, a custom that increased during the recession of the 1930s and beyond; in addition, high multiparity was a factor that increased maternal mortality, the first estimates of which were reported for the period 1947-1952, with 446 women dying per 100,000 live births at the Maternidad de Lima[50].

In 1909, the German gynecologist Richard Richter presented the first intrauterine device (IUD), which consisted of a loop of silk thread[51]; in 1928 his compatriot and colleague Ernst Gräfenberg, showed one made of silver or gold wires rolled up. But it was only in the late 1940s, when the idea of the population explosion came of age, that interest in IUDs reappeared as a possible solution in developing countries[50].

In late April 1962, the Population Council, an international non-profit, non-governmental organization that conducts biomedical research on public health, held the first international conference on IUDs in New York, United States of America (USA), This allowed the first IUD to be brought to the country, in this case the Zipper nylon ring[50], invented in 1959 by the Chilean physician and physiologist Jaime Zipper, who, in 1967, would devise the copper T[49].

In those years, Dr. Carlos Bachmann Sánchez, a doctor at the Lima Maternity Hospital, succeeded, through educational talks, in getting 60% of postpartum or post-abortion women to use an IUD[50]. In the following years, the aforementioned copper T and the spiral of synthetic material became popular in our country.

In 1928, the Austrian physician Hermann Knauss, and in 1930, the Japanese gynecologist Kyusaku Ogino established that in the menstrual cycle there were some fertile and infertile days and that if sexual relations were avoided on the former, the birth rate could be regulated[49]. Being the only contraceptive method accepted by the Catholic Church, it acquired great diffusion in Peru before the appearance of oral contraception, although it continues to be used especially by the most religious sectors.

Meanwhile, in 1957, the Food and Drug Administration (FDA) authorized the use of Enovid - a combination of mestranol (150 micrograms) and norethynodrel (10 milligrams) - not as a contraceptive, but as a drug to regulate menstruation; however, on June 23, 1960, the pill received permission to be sold explicitly as an oral contraceptive. Thus, the United States began a revolution that was to have a profound impact on the lives of millions of women around the world, including Peruvian women, ushering in a new era for humanity[52].

In 1964, the Peruvian State outlined the first family planning programs, which synergized with the activities of the Peruvian Association for Family Protection (APPF), a private entity founded in 1967 by a group of Peruvian doctors, mostly obstetrician-gynecologists, which became the largest supplier of contraceptives in Peru between the end of that decade and the beginning of the next. However, the government of General Juan Velasco Alvarado deactivated the APPF in 1975, a reminder of how fragile civil society institutions are in any dictatorship[50].

Studies on subdermal contraceptives, which create reservoirs of a progestogen, began in 1969. The first were approved in the USA in 1984[49], and from the following decade they began to be used frequently in our country, being offered initially by the private sector.

In 1985, the first National Population Policy was promulgated, which included the public offer of family planning services through the Obstetric Services of the Peruvian Institute of Social Security (IPSS) in 1986, and of MINSA in 1987[53]. In 1986 and 1991, the I and II Demographic and Family Health Surveys were carried out by the National Institute of Statistics and Informatics (INEI), which, among other things, sought to determine the knowledge and use of available contraceptive methods and to measure changes in fertility regulation during that period[54]. In the first survey, 88% of the women surveyed were aware of their existence, and in the second, 92.8%; but in 1991, only 57% of those of reproductive age were using any method[54].

## Imaging

The high mortality of breast cancer during the first decades of the 20th century was related, in most cases, to diagnosis in advanced stages. In the 1950s, mammography was introduced into clinical practice as a very useful tool for the early diagnosis of this cancer[55], Leborgne being the first to describe his technique and the adjustments of the X-ray machine. However, in the 1960s, the protocols described by Egan and Gershon-Cohen are the ones that became widely disseminated[56]. Mammography was introduced to Peru in the 1970s by Dr. Ladis Delpino Artadi, a medical radiologist, who had learned it from Dr. Jacob Gherson-Cohen in Philadelphia, USA[57]. The first technique he imported was xeroradiography, which from the 1990s would be progressively replaced by digital mammography.

In 1951, Wild and Neal described the first ultrasound of the mammary gland[58] and, in 1963, the English physician Ian Donald presented the first static B-mode ultrasound image of an ovarian cyst. From then on, it became possible to observe the interior of the pelvis in gynecology and the pregnant uterus in obstetrics[59]. However, it was only in the early 1970s that this method would become relevant, due to the concern for the side effects of X-rays[58]. Thus, Dr. Elio Quirós Díaz, a radiologist, introduced ultrasound to Peru in 1977; shortly after, Dr. Manuel Mancilla Barbarán, at the Maternity Hospital in Lima, put it to obstetric use[3].

In 1991 the first U3D ultrasound equipment appeared in the world; in 1998 it took 25 seconds to store an image and minutes or hours to reconstruct it in 3D; by 2005, the evolution of the software would allow the capture of images in tenths of a second and reconstructions in real time, being able to obtain sequences of up to six images per second, which allows direct observation of the movement, constituting the four-dimensional (4D) modality[60].

In obstetrics it significantly improved the diagnosis of facial and palatal cleft, decreasing the rate of false positives; it also increased the detection rate of dysmorphology in the extremities, such as alterations in the number of fingers, musculoskeletal dysplasias and the proportion of body segments[60]. In gynecology it substantially optimized the diagnosis of multiple uterine and adnexal pathologies[60].

## Climacteric and menopause

The development of medical science led to a significant increase in the life expectancy of women throughout the 20th century, to the point that in 1990 the world female population over 50 years of age was approximately 470 million[61], and thus there was a need to develop the subspecialty of Climacteric and Menopause[62].

From the 1970s onwards, specialized services were progressively installed, initially in the main public hospitals in the country, and then in lower-level hospitals and in the private sector, among the pioneers being the Maternidad de Lima, today the Instituto Nacional Materno Perinatal (INMP), the HNGAI and the HNERM, all located in Lima.

The main means of dissemination of this subspecialty was the journal Gynecology and Obstetrics, currently the Peruvian Journal of Gynecology and Obstetrics (Revista Peruana de Ginecología y Obstetricia): in 1955 the first original article on gynecological cancer during the climacteric period -Relation between endometrial hyperplasia and endometrial adenocarcinoma- was published; that same year the first article on the clinical and pathophysiological aspects of the climacteric period -Functioning feminizing ovarian tumors- appeared; four years later, in 1959, the first on hormonal therapy in climacteric and menopause -Contribution to the treatment of dysfunctional metrorrhagia- was published; much later, pioneering research was presented on cardiovascular health and climacteric -Cardiovascular impact of climacteric (1994)- and sexuality and menopause -Sexuality in menopause (1996)-[63].

## Reproductive Medicine

The pioneer of this subspecialty in Peru was Dr. Jorge Ascenzo Cabello, who after specializing in Buenos Aires, Argentina, began his work at the Central Police Hospital, the Italian Clinic and the Rosalía Lavalle de Morales Macedo Hospital -Hogar de la Madre-. In 1950 he founded the Peruvian Center for Marriage Fertility, dedicated exclusively to the study and treatment of childless couples, but for political reasons during the government of General Juan Velasco Alvarado, he had to change its name to Fertility Institute[64].

On July 25, 1978, the birth of Louise Brown, the first human being conceived through in vitro fertilization, was a worldwide milestone[65]. In Peru, in 1985, the first biomedical team was formed to perform gamete to fallopian tube transfer (GIFT) procedures at the Delgado Clinic in Miraflores, Lima, and by the end of 1989 in vitro fertilization was performed for the first time thanks to a group of Peruvian physicians headed by Dr. Luis Gilberto Noriega Hoces and Dr. Ladislao María Prazak Krofta, both obstetrician-gynecologists at the Instituto de Ginecología y Reproducción in Lima, where the baby girl they named Victoria was conceived and born in August 1990[65].

In the 1980s, procedures such as oocyte transfer to the fallopian tube (1983), the transfer of both gametes (oocytes mixed and incubated with capacitated sperm) with the intra-fallopian gamete transfer technique (1984), and the transfer of the zygote to the tube (1987) had been developed worldwide[66].

In 1993, the first embryo cryopreservation procedures were performed in Peru using a sequential temperature lowering program, and later, in the same decade, the first assisted human reproduction (AHR) procedures were performed with donated oocytes and cryopreserved embryos[65]. The initial development of the practice was mainly in the private sector, due to the high costs involved.

### Fetal Medicine and Surgery

In 1956 the first amniocentesis was performed as a means to evaluate the severity of Rh isoimmunization[67]; and in 1960 the first cordocentesis was performed as a method to take a fetal blood sample[68].

In 1971, Gluck and Kulovich studied the possible causes of neonatal respiratory distress in amniotic fluid obtained by amniocentesis; years later they established the predictive value of the lecithin/sphingomyelin ratio for pulmonary maturity[69]. In 1974, at Yale University, USA, the first fetal visualization by fetoscopy was performed, initially aimed at direct diagnosis or for obtaining biopsies; it was later applied in fetal surgery[69].

On April 26, 1981, Michael Harrison, surgeon at the University of California, San Francisco, USA, performed for the first time in medical history the drainage of an obstructive megacystis, placing a vesicoamniotic catheter, under ultrasound guidance, in one of the fetuses of a dizygotic twin pregnancy; the neonate was born on May 10 and evolved favorably; for this reason, Harrison is recognized as the "Father of Fetal Surgery"[69].

On May 7, 1999, the Fetal Medicine Service of the INMP was created, which from the beginning was considered a national reference center, due to the quality of its professional staff and the great variety of pathologies it diagnosed and treated, being among the largest in the country. However, the main advances of this subspecialty in Peru would occur in the first years of the following century.

### Acquired Immunodeficiency Virus (HIV) and Obstetrics

The first case of AIDS in Peru was diagnosed in 1983 by Raúl Patrucco Puig, professor and researcher at UPCH; Law No. 25275, enacted on July 24, 1990, made it mandatory for all pregnant women to undergo diagnostic tests for the infection[70]. The course of this pandemic was significantly modified with the advent of antiretrovirals, whose administration began in Peru in 1996, with the strategy of prevention of vertical transmission, which also recommended the suspension of breastfeeding. In 1999, the Social Health Insurance (EsSalud) introduced highly active antiretroviral treatment (HAART), and then MINSA, through the 2000-2005 CONTRASIDA Plan, introduced it in its facilities, which on May 13, 2004 began providing HAART[71].

Despite the years that have passed, it has not been determined exactly why some children of HIV (+) mothers become infected and others do not; however, factors that increase the risk and preventive strategies that decrease the rate of transmission have been identified[72]. The risk of transmission before or during delivery, without any intervention, is 15-25%; when breastfeeding occurs, the risk increases by 5-20%, raising the total risk to 20-45%; this risk could be reduced to less than 2% with a combination of elective cesarean section, antiretroviral prophylaxis for the pregnant woman and the newborn, and suppression of breastfeeding[72].

The risk is also increased by maternal factors (high viral load and low CD4+ cell count), vaginal delivery, and preterm birth[72]. Breastfeeding has a cumulative risk; the longer the breastfeeding period, the higher the risk of transmission[72].

## 3.3. 21st century

The beginning of the 21st century saw the emergence of numerous technologies and procedures, some substantially improving existing ones and others completely new, many of which were imported into our country and revolutionized the practice of gynecology and obstetrics. However, not all was progress, in the early years of the current century intrusion became more evident, particularly affecting obstetrics.

In June 2006, the Constitutional Court (TC) accepted the action of unconstitutionality filed by the National Council of the CMP against Law No. 28686, which created the College of Obstetricians of Peru for midwives[73]. This provision violated university autonomy, since it did not take into consideration that the profession of obstetrician already existed as a specialty of the obstetrician-gynecologist, who had belonged to the CMP since its foundation[73]. This court ruled on January 22, 2007, declaring the lawsuit unfounded, although Justice Gonzales Ojeda issued a single vote in favor of the CMP's request[74].

The CMP did not relent in its fight against intrusiveness. Thus in 2016 the Transitory Advisory Committee to Fight Professional Intrusiveness

was established as an advisory body to the National Council of the CMP, which would later become the National Committee to Fight Intrusiveness, which was organized into subcommittees, one of them being the Obstetrics Committee. Despite the various activities carried out (judicial complaints, informative forums, meetings with the authorities of the health sector and universities, among others), we are still far from putting an end to this harmful practice.

A controversial and singular issue in the evolution of Peruvian contraception was emergency oral contraception (EC), better known as the "morning-after pill" - Levonorgestrel 0.75 mg - whose use as public policy was approved by MINSA under Ministerial Resolution No. 399-2001-SA/DM[75]. However, on October 29, 2004, the NGO Acción de Lucha Anticorrupción (Action for the Fight Against Corruption) filed an amparo lawsuit against MINSA, requesting that it refrain from initiating the distribution of the OEC pill, and from disseminating promotional information, insisting on its alleged abortive effect[76].

As a consequence, the Constitutional Court declared this lawsuit well founded, through the sentence of October 22, 2009 (Case No. 2005-2009-PA/TC), which however did not prevent its sale in pharmacies and private drugstores in the country.

The development of minimally invasive surgery in gynecologic oncology is another contribution of recent years, which includes advanced conventional laparoscopy, robotic surgery, and single-port laparoscopy which, depending on the indications in each case, can be used in endometrial, cervical and ovarian cancer[77]. INEN is the facility in the country where such procedures have been developed with greater specialty and frequency.

On October 4, 2013, the new premises of the Reproductive Medicine Unit of the INMP was inaugurated, which was the pioneer in the public sector in assisted reproduction procedures of high complexity, counting with modern laboratories of Andrology and Gametes and Embryos, the latter that would work in the operating room, and was able to perform the techniques of INVO, INVOICSI, ICSI, in vitro fertilization and cryopreservation of gametes and embryos[3]. By virtue of this, in 2019, the first two cases of cryopreserved oocytes were recorded to ensure the fertility of two women carriers of gynecological malignancies.

However, ovodonation, which would allow a woman with ovarian deficiency to conceive through the transfer of an egg from a third party (donor), is currently not permitted according to the provisions of article 7° of the General Health Law (Law 26842)[78].

Our fetal surgery also marked several milestones: in 2011, Albinagorta reported an intrauterine thoracentesis of congenital chylothorax; in 2012, Molina reported the first case of fetal surgery performed in Huancayo, which consisted of laser-argon photocoagulation in twins; in 2016, Torres reported the first case of intrauterine blood transfusion in a sacrococcygeal teratoma; that same year Ventura published four cases of fetoscopy and selective bipolar coagulation in monochorionic twins with reverse arterial perfusion syndrome (TRAP); in 2017, Ventura reported the first case of open surgery in meningococele, which involved the collaboration of a surgical team from Chile; and in 2018, Ventura reported three cases of pulmonary cystic adenomatoid cystic malformation, macrocystic variety, subjected to intrauterine therapy with thoracoamniotic shunt[69].

Since 2015, MINSA introduced the vaccine against human papillomavirus (HPV) in the National Vaccination Schedule, as a preventive for cervical cancer, to be applied in girls in the fifth grade of primary school or 10 years old in case they are not in school[79].

On December 31, 2019, the announcement of the first case of pneumonia caused by a new coronavirus (SARS-CoV-2) was made in the city of Wuhan, Hubei Province, People's China; since then, cases spread rapidly worldwide; on March 13, 2020, the World Health Organization (WHO) recognized it as a pandemic[80].

In Peru, as in much of the world, this phenomenon constituted a formidable challenge for physicians in the specialty; most of those infected evolved in a mild form and in pregnant women the severe form constituted less than 10% and less than 2% were admitted to intensive care units (ICU). When the disease occurred in the third trimester, there was a high percentage of

prematurity and a higher frequency of premature rupture of membranes. However, vertical transmission was not conclusively demonstrated and infections in newborns appeared to occur by horizontal transmission[80].

This pandemic contributed to the increase in maternal mortality in Peru; although pre-pandemic trajectories could recover once extensive vaccination has been carried out. However, our health system requires urgent reengineering to guarantee access to services for those who require care[81]. One aspect that developed as a result of the pandemic was telemedicine and teleworking, the growth of which will continue even after the Covid-19 problem is resolved.

## Colophon

We have reached the end of these brief notes on the history of Gynecology and Obstetrics in Peru, which have made it possible to travel through several centuries, numerous facts, characters and places, whose memory should be imperishable for current and future generations of the Peruvian medical order. Certainly not all topics have been covered and exhausted, being the main purpose of this article to stimulate the interest of physicians and historians, so that in the future they continue to deepen in this exciting and substantial history.

## References


1. Lastres J. Historia de la Medicina Peruana. Medicina incaica. Volumen I. Lima, Perú: Imprenta Santa María. 1951:224-7.
2. Seminario T. Puericultura y Pediatría. 1ra ed. Lima, Perú: Imprenta El Cóndor. 1953:10-21.
3. Álvarez R. Historia del Instituto Nacional Materno Perinatal través de las imágenes. Lima, Perú: Industria Gráfica Cimagraf S.A.C. 2014: 23-27, 34, 37-39, 41, 43, 64, 126.
4. Alayza F. Historia de la Cirugía en el Perú. Lima, Perú: Editorial Monterrico SA. 1992: 110, 138, 140, 141, 176, 177, 256, 296, 297, 310, 348-351, 357-363.
5. Valdizán H. Diccionario de Medicina Peruana. Tomo II. Lima, Perú: Talleres gráficos del Hospital Víctor Larco Herrera. 1938: 89, 124, 135, 136.
6. Moloche R. La Maternidad de Lima. Contribución a la historia de la obstetricia. Revista Universitaria. 1908; 2(25):221-81.
7. Valdizán H, Bambarén C. Biblioteca centenario de medicina peruana. Lima, Perú: Editores Sanmarti y Cía. 1921: 137, 139-142, 154.
8. Lastres J. Historia de la Medicina Peruana. Medicina en la república. Medicina en la República. Volumen III. Lima, Perú: Imprenta Santa María. 1951:186-8.
9. Lastres J. Historia de la Medicina Peruana. Medicina en el virreinato. Volumen II. Lima, Perú: Imprenta Santa María. 1951: 233, 234, 243, 243.
10. Operación Cesárea. Mercurio Peruano. 1794;12(595):11-2.
11. Descripción anatómica de un monstruo. Mercurio Peruano. 1791;1(1):7-8.
12. Sobre un fetus de nueve meses que sacó a una mujer por el conducto de la orina el año de 1779. Mercurio Peruano. 1792;5(147):66-72.
13. Pamo O. La magia de Unanue según la magia del doctor Uriel García. Rev Per Med Interna. 2011;24(2):90-101.
14. Álvarez R, Hipólito Unanue y el legado de la familia Landaburu. 2da ed. Lima: Fondo Editorial Comunicacional del CMP. 2018:191.
15. Quiroz L. De la comadrona a la obstetriz. Nacimiento y apogeo de la profesión de partera titulada en el Perú del siglo XIX. Dynamis. 2012;32(2):415-37.
16. Valdizán H. Diccionario de Medicina Peruana. Tomo V. Lima, Perú: Imprenta San Marcos. 1959:119-121, 222.
17. Bachmann C. El Obstetra. Lima: Centro de impresiones de la UPCH. 1991: 38, 39, 116.
18. Rabí M. De la Casa de Maternidad al Instituto Nacional Materno Perinatal 1826-2006. Lima, Perú: Talleres gráficos del Hospital Nacional Docente Madre Niño San Bartolomé. 2006: 12, 15-18, 25-28, 32-35, 37, 38, 41, 57-61, 78, 79, 81-83, 85, 93, 97, 100, 101, 103, 104, 106, 108-110, 113, 114, 116, 117, 119, 133, 153-157.
19. Deza L. Los inicios de la obstetricia como especialidad médica en el Perú. Ginecol Obstet. 1993;39(16):82-7.
20. Molina L. Historia de la Obstetricia y Ginecología en el Perú. Ginecol Obstet. 1968;14(3):407-19.
21. Bazul VM. Contribución al estudio de la operación cesárea segmentaria. Tesis doctoral UNMSM. Lima: Librería e imprenta de D. Miranda. 1941: 43, 46, 47, 90, 91.
22. Ulloa C. El D. D. Camilo Segura. Gaceta Médica de Lima. Primera época. 1863;8(163):61-2.
23. Zayas F, Tome P. Albores y evolución de la Obstetricia. 16 de abril. 2021;60(280):1-7.
24. Bazul V. Obstetricia y Ginecología. En: Historia de la Medicina Peruana en el siglo XX. Tomo I. Lima, Perú: Centro de producción editorial de la UNMSM. 2000: 638, 643, 644.
25. Valdizán H. La Facultad de Medicina de Lima. Tomo I. Lima, Perú: Imprenta y fábrica de fotograbados Sanmarti y Cía. 1911: 17, 23, 29, 130, 160, 172, 349, 350.
26. Herrera J. La Universidad Mayor de San Marcos y la Guerra del Pacífico. Lima, Perú: Talleres gráficos de la Editorial Universo S.A. 1981: 123, 233.
27. Álvarez R. Apuntes para la historia de la Anestesiología en el Perú. Desde la época precolombina hasta 1947. Actas Peru Anestesiol. 2011;19:69-79.
28. Graña A. El Dr. Lino Alarco y su época. Acta Med Per. 2008;25(3):187-9.
29. Álvarez R. Constantino Carvallo Loli. Padre de la ginecología y obstetricia moderna pionero de la radiología, bioseguri-

dad y cirugía en el Perú. Lima, Perú: JERGIMPRESS E.I.R.L. 2011:37-66.

30. Avendaño J. Perfiles de la Medicina Peruana. Lima, Perú: Imprenta de la Universidad Nacional Mayor de San Marcos. 1983:9-13.
31. Clínica Ginecológica. Rev La Crónica Médica. 1899;16(258):333-8.
32. Álvarez R. Constantino J. Carvallo Alzamora, primer presidente de la Sociedad Peruana de Obstetricia y Ginecología. Rev Peru Ginecol Obstet. 2017;63(3):325-32.
33. Franco R. Editorial. Ginecol Obstet. 1955;1(1):93-9.
34. Álvarez R. El Colegio Médico del Perú. Una visión retrospectiva de sus primeros 50 años de historia. Lima, Perú: REP S.A.C. 2017:56-58, 174, 175.
35. Álvarez R. Los primeros 100 años de la Patología en el Perú 18561956. Lima, Perú: Asociación Médica Peruana de Patología Clínica. 2021: 227, 250, 251.
36. Bustíos C. La Salud Pública, la Seguridad Social y el Perú Demoliberal (1933-1968). Lima, Perú: Concytec. 2005: 113, 114, 129, 235, 259, 373, 375, 377, 555.
37. Lip C, Lazo O, Brito P. El trabajo médico en el Perú. Lima, Perú: Universidad Peruana Cayetano Heredia; 1990: 77, 78.
38. Burstein Z. Historia de los programas de formación y titulación de médicos especialistas en el Perú. Rev Peru Med Exp Salud Publica. 2014;31(3):598-600.
39. Berríos J. Introducción. El residentado médico en el Perú. Anales de la Academia Nacional de Medicina. 2005:78-81.
40. Garmendia F. El residentado médico en el Perú. Anales de la Academia Nacional de Medicina. 2005:73-7.
41. Ludmir A. Pasado, presente y futuro del residentado médico en el Perú. Ginecol Obstet. 1993;39(16):12-6.
42. Pamo O. Introducción. El residentado médico en el Perú. Diagnóstico. 2019;58(3):117-21.
43. Baskett T. Aschheim, Selmar (1878-1965) Zondek, Bernhard (1891-1966): Prueba de embarazo de Aschheim-Zondek. En: Epónimos y nombres en Obstetricia y Ginecología. Cambridge: Cambridge University Press. 2019: 8, 9. doi: 10.1017 / 9781108421706.008
44. Velásquez N. Pruebas para diagnóstico de embarazo. Rev Obstet Ginecol Venezuela. 2009;69(3):186-92.
45. Mejía G. Reacción de Galli Mainini para el diagnóstico precoz del embarazo. Rev Fac Med. 1949;18(6):443-51.
46. Varela S. Citología cervical. Rev Med Hondur. 2005;73:131-6.
47. Zegarra L. Epidemiología e historia natural del cáncer del cérvix uterino. Ginecol Obstet. 1975;21(1-3):63-7.
48. Solidoro A, Olivares L, Castellano C, Barriga O, Galdós R, Cáceres Graziani E. Cáncer de cuello uterino en el Perú: Impacto económico del cáncer invasor. Diagnóstico. 2004;43(1):29-33.
49. Vásquez A, Suárez N. Conocimiento y uso de métodos anticonceptivos en la población de 15 a 44 años del área urbana, Cunduacán. Horizonte Sanitario. 2005;5(2):8-25.
50. Necochea R. La Asociación Peruana de Protección Familiar y los inicios de la anticoncepción en el Perú (1967-1975). Histórica. 2009;33(1):87-130.
51. Campohermoso O, Mamani R, Soliz R. Translocación de dispositivo intrauterino. Reporte de un caso. Cuadernos. 2015;56(2):49-54.
52. Galán G. 50 años de la píldora anticonceptiva. Rev Chil Obstet Ginecol. 2010;75(4):217-20.
53. Aramburu C. Idas y vueltas: los programas de planificación familiar en el Perú. Rev Latinoam Población. 2014;8(14):81-103.
54. Loza G, Vallenas G. Uso y demanda de anticonceptivos en el Perú. Santiago de Chile: Centro Latinoam Demografía (CELADE). 1992: 9, 10.
55. Abugattas J, Manrique J, Vidaurre T. Mamografía como instrumento de tamizaje en cáncer de mama. Rev peru ginecol obstet. 2015;61(3):311-19.
56. Aspron M. Mamografía. Analógica y digital. Historia, evolución. Rev Argentina Mastología. 2020;39(141):47-115.
57. Del Pino L. Radiología. En: Historia de la Medicina Peruana en el siglo XX. Tomo I. Lima, Perú: Centro de producción editorial de la UNMSM. 2000:739-53.
58. Montes RS. Historia del Diagnóstico por la imagen de la mama. Medicina Balear. 1995;10(3):155-9.
59. Guzmán A. Avances en las aplicaciones de la velocimetría Doppler en ginecología Rev Per Ginecol Obstet. 2009;55(3):167-73.
60. Rivera M. Ecografía tridimensional en ginecología y obstetricia. Med UNAB. 2005;8(2):125-9.
61. Matzumura-Kasano J. Climaterio y menospausia: una sociedad que envejece. Rev Peru Obstet Enferm, USMP. 2005;1(1):64-8.
62. Vélez E, Figueredo L. Importancia histórica del climaterio y la menopausia. Rev Educ Valores. Universidad de Carabobo. 2016;2(26):48-57.
63. Ayala F, Ayala R, Ayala D. Climaterio y menopausia: aporte de 70 años de vida institucional. Rev Peru Ginecol Obstet. 2017;63(3):455-62.
64. Ascenzo A. La Sociedad Peruana de Obstetricia y Ginecología y la reproducción humana en el Perú. Rev Peru Ginecol Obstet. 2017;63(3):385-91.
65. Llerena G. Veinticinco años de reproducción humana asistida en el Perú. Vox Juris. 2014;28(2):147-60.
66. Álvarez-Díaz. Historia contemporánea: las técnicas complejas de reproducción asistida. Ginecol Obstet Mex. 2007;75:293-302.
67. Bevis DC. Blood pigments in haemolytic disease of the newborn. J Obstet Gynaecol Br Emp. 1956;63:68-75.
68. Weiner C. Cordocentesis: Technique. En: Kurkak A. Textbook of Perinatal Medicine. Vol. 2. Parthenon Publishing Group.1988:1061.
69. Huamán M. Historia de la cirugía fetal. Rev Peru Ginecolog Obstet. 2019;65(4):479-85. doi: https://doi.org/10.31403/rpgo.v65i2208
70. Cueto M. El rastro del SIDA en el Perú. Manguinhos. 2002;9(suplemento):17-40.

71. Gotuzzo E. SIDA en el Perú: Impacto de la terapia antirretroviral de gran actividad (TARGA). Rev Med Hered. 2007;18(4):181-3.

72. Álvarez-Carrasco R, Espinola-Sánchez M, Angulo-Méndez F, Cortez-Carbonell L, Limay-Ríos A. Perfil de incidencia de VIH en embarazadas atendidas en el Instituto Nacional Materno Perinatal de Lima, Perú. Ginecol Obstet Mex. 2018a;86(1):108-16. doi: https://doi.org/10.24245/gom.v86i2.1900

73. TC admite acción de inconstitucionalidad. Mundo Médico. 2006;3(10):12-3.

74. Sentencia del Tribunal Constitucional. Expediente Nº 00010-2006-PI/TC (Ene. 22, 2007).

75. Justo J. La píldora del día siguiente y el tratamiento de los derechos humanos en el Perú (Tesis de maestría). Lima, Perú: Universidad Católica del Perú. 2012: 19, 20.

76. Pretell-Zárate EA. Política de anticoncepción oral de emergencia: la experiencia peruana. Rev Peru Med Exp Salud Publica. 2013;30(3):487-93.

77. Valdivia H, Zevallos A, Álvarez M, Santos C, Sánchez M. La cirugía mínimamente invasiva evolución y su aplicación en ginecología oncológica. Rev peru ginecol obstet. 2013;59:281-7.

78. Gonzales S. Situación jurídica y jurisprudencial de las técnicas de reproducción humana asistida en el Perú: el caso de la ovodonación (Tesis de licenciatura en derecho). Lima, Perú: Universidad Ricardo Palma. 2017:pp. 104.

79. Bendezú-Quispe G, Soriano-Moreno A, Urrunaga-Pastor D, Venegas-Rodríguez G, Benítez-Zapata V. Asociación entre conocimientos acerca del cáncer de cuello uterino y realizarse una prueba de Papanicolaou en mujeres peruanas. Rev peru med exp salud publica. 2020:37(1):17-24.

80. Vigil-De Gracia P, Carlos Caballero L, Ng Chinkee J, Luo C, Sánchez J, Quintero A, Espinosa J, Campana Soto SE. COVID-19 y embarazo. Revisión y actualización. Rev Peru Ginecol Obstet. 2020;66(2). doi: https://doi.org/10.31403/rpgo.v66i2248

81. Gianella C, Ruíz-Cabrejo G, Villacorta P, Castro A, Carrasco-Escobar G. Reverting five years of progress: Impact of COVID-19 on maternal mortality in Peru. CMB Brief no.2021;1:4 p.