

# Paediatrics, the People and Politicians in Spain – History, Development, Reality and Future

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## 1. Introduction

The paper examines the origins of Paediatrics in Spain since 1600. It mentions some of the main pioneers for the speciality highlighting the role of, among others, Jerónimo Soriano, considered the forefather of the speciality in Spain. It looks at the factors that gradually contributed to the beginnings of Paediatrics as a specific branch, distinct from General Medicine and Obstetrics, explaining the slow but spectacular advances in Paediatrics to date. Of particular note are the contributions of Luis Mercado, Andrés Martínez Vargas, Ángel Ballabriga Aguado, Manuel Cruz Hernández and Juan Rodríguez Soriano, among others. It emphasises the late arrival of Institutions to protect and care for children. It examines the beginnings of public healthcare in 1942, analysing the work of the different organisations involved, particularly the National Health Institute. It highlights the quality of the Spanish Public Health System but warns of the risks that it could be facing in the near future, analysing the current reality and circumstances after the transfer of health from the State to the Autonomous Regions. It looks at the achievements of Paediatrics and its specialities, thanks among other things to the self-sacrifice of its professionals and the establishment of the training programme for young doctors, called MIR. It criticises certain aspects of the political management of Paediatrics and healthcare in general. It argues for Paediatrics to be defended to ensure that it remains as currently organised, with its professionals present in Primary Health Care and Hospitals. Finally, it outlines the need for a comprehensive healthcare agreement in Spain, one in which the opinions of the public and professionals are taken into account, to maintain and increase the quality of the current health system, guaranteeing its future.

## 2. The protohistory

Everything began 1,300 years ago. In 714, Spain was ravaged by a smallpox epidemic. Several arab doctors described it with exactitude and differenced it from other diseases. This is the first evidence of an infant disease written in Spain. Arabs created several medicine schools, the one in Cordoba being the most important with 300,000 medicine texts in its library.

Many Arab doctors wrote about infant diseases in their works. Among them, Garibai-Ben-Said and Kalaph-Ben-Abbas-Abbulcassem published some books in which they described the newborn care, diseases and several techniques as hydrocephalus, amygdalotomy and tracheostomy.

The children protection began in 12<sup>th</sup> and 13<sup>th</sup> centuries in Aragón and Castilla after the promulgation of some laws by King Alfonso X "The Wise" of Castilla and King Pedro IV of Aragón. The first of them, in the law "Fuero Juzgo" sentenced the abortion and the infanticide. The second of them, King Pedro IV, created the figure of "Judge and Father of Orphans", whose mission was to look after children's health, to keep them away of begging and to lead them to work. There even were centers where children received food and education. Bernardo Gordonio, in his book published in 1496, dedicated one chapter to newborn care. His work was dedicated to Queen Isabel of Castilla and King Fernando of Aragón, known as 'Catholic Monarchs'. Pedro Díaz de Toledo, Onofre Bruguera and others also discussed children's diseases years later (Laín Entralgo, 1992; García Nieto et al., 2011).

### 3. The foundations

We have no way of knowing whether Jerónimo Soriano, a doctor from Teruel, was aware when he published his work: *Methodo y orden de curar las enfermedades de los niños*, "Method to Treat the Diseases of Children" (Arana de Amurrio, 2000; Soriano, 2000; Valle Sánchez et al., 2000) in Spanish in 1600, that he was placing the first building block for a speciality that has become extremely well developed in Spain. After him, other outstanding doctors dedicated their wisdom to the subject: "it is very dangerous to talk about curing things so dark and uncertain only the basis of conjecture". Until then children had been cared for by midwives and the oldest women. Jerónimo Soriano, seeing the lack of attention to children at that time, included original ideas and observations in his book (Figure 1), describing coeliac disease, cradle cap, meningitis, nephritic colic, stomatitis and intestinal malabsorption, distinguishing between febrile ("epilepsy") and non-febrile convulsions, and examining the difference with sobbing spasms ("twitching" or "pasmó", sic). He sensed that there were family hereditary factors behind epilepsy. His recommendation for fever was not wrapping the child up but instead bathing it in lukewarm water. He exactly identified the causes of snoring and breathing difficulties during sleep due to nasopharyngeal obstructions. He established the differences between the various types of intestinal parasites. He talked about dystrophy caused by poor nutrition and advised controlling both the quantity and the quality of food, concepts that would have to wait for the positivist medicine of the 19<sup>th</sup> century, with the treatises of Albert Czeny and Otto Heubner, to receive their due prominence. In the treatment of diarrhoea, he established the essential rules of fasting for several hours, abstaining from drinking milk "so as not to curdle in the stomach" and the administration of small amounts of sugary drinks. He associated cradle cap with the subsequent appearance of eczema and advised having cold drinks with external crystal violet substances in them for mouth ulcers. He described some of the most common psychiatric, respiratory and cardiac problems in his century. In his work he reports findings that were truly novel for that time and that continued to be used, in some cases even into modern times. In addition, his remedies and treatments are always the least aggressive for the children (Arana de Amurrio, 2000; Soriano, 2000; Valle Sánchez et al., 2000).

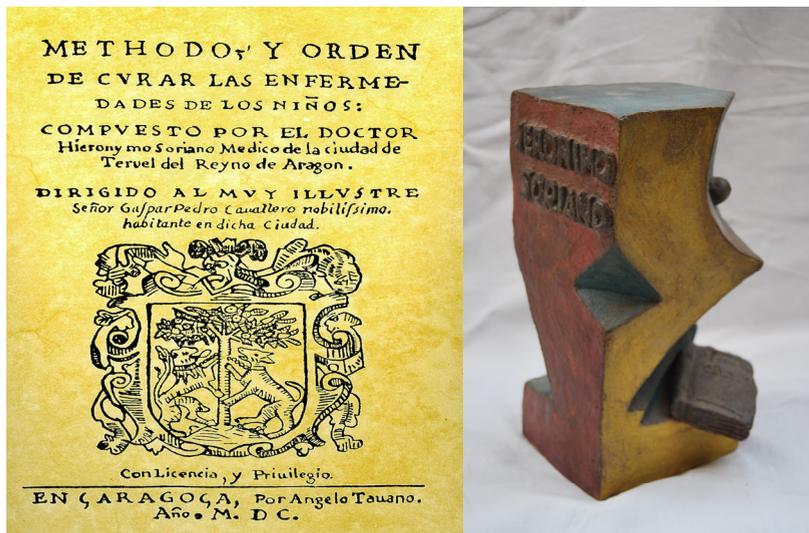


Fig. 1. Facsimile of Soriano's Teatrise (front). Allegoric Monument of Jerónimo Soriano by Antonio Cobos, situated in Hospital Obispo Polanco, Teruel, Spain.

To this one must add his complete disinterest in money, his love for even the most helpless child, the opening of a free consulting room for children, the founding at his own expense of the first reported Hospital dedicated entirely to helping children, and his fight against malpractice (Figure 2).



Fig. 2. Santa María de Mediavilla Cathedral, Teruel (Spain). Infant Hospital founded by Jerónimo Soriano in 16th Century was near it.

Jerónimo Soriano had already sensed that medical care for children and adolescents should be different to that provided to adults and the elderly, anticipating by more than 200 years the construction of the first hospital dedicated to children in France. The inhabitants of the city of Teruel called him “*señor san Jerónimo*” (Mister Saint Jeronimo) for his immense human qualities. There were 6 reeditions of his treatise, the last in 1721. So for almost two centuries he had a great scientific influence over many Spanish, European and American doctors.

In 1595 the book *Libro de experimentos médicos, fáciles y verdaderos, recopilados de varios autores* was published. This was the first scientific work written in Spanish with the intention of reaching the largest possible number of readers. It is considered the first medical encyclopaedia whose publication was aimed not only at doctors but also at the general public. It was a great success and it was reedited on 15 occasions over two centuries (Arana de Amurrio, 2000; Soriano, 2000; Valle Sánchez et al., 2000).

As recognition of the person and of his works, the Spanish Paediatric Association has for the last six years been running the Jerónimo Soriano Award for the best article published over the previous year in its official journal *Anales de Pediatría* (Pérez-Yarza, et al., 2009), having created for this purpose the Patronato Jerónimo Soriano Board involving various scientific Institutions and individuals. Seven years ago, the Regional Paediatric Society of Aragón, La Rioja and Soria organised a Jerónimo Soriano Research Project, with a social and humanitarian content, to meet the basic needs of disadvantaged children and adolescents in different parts of the world.

Years earlier, in 1541, Damián Carbó (or Carbón) had tried to provide some guidance on the topic in his text on pregnancy and childbirth called *Libro del arte de las comadres o madrinas y del regimiento de las preñadas y paridas de los niños* (Rodríguez Tejerina, 1981). Other important doctors such as Luis Lobera de Ávila, Luis Mercado, and Francisco Pérez Cascales (between 1551 and 1611) also dedicated their efforts in those olden times, focussing largely on the treatment of malignant diphtheric angina or “*croup*” (García Nieto et al. 2011, Laín Entralgo, 1992; Rodríguez Tejerina, 1981).

In 1611, Luis Mercado published the book *De puerorum educatione, custodia y providentia, atque de morborum, qui ipsis accidunt, curationi, libri duo* (Figure 3). Luis Mercado, professor at the University of Valladolid and doctor to the court of kings Felipe II and Felipe III of Spain, is considered to be the “Saint Thomas of Spanish medicine”. His works were known and appreciated throughout Europe. The aforementioned book has specific paediatric content which spiritually was a continuation of Jerónimo Soriano’s treatise. Luis Mercado was a true Renaissance man. All of the medicine in this period was characterised by an increase and revaluation of clinical observation. Another of his works *Consultationes morborum complicatorum et gravissimorum* was dedicated to “*croup*” and he also looked at the plague and exanthematic typhus (“*typhoid fever*” or “*tabardillo*”, sic.) in other publications (García Nieto et al., 2011; Laín Entralgo, 1992; Rodríguez Tejerina, 1981). One of Luis Mercado’s great contributions was paving the way, through the synthetic order of his works, for the appearance of paediatric specialities. His fame is reflected in the impressive portrait dedicated to him by the great painter El Greco (García Nieto et al., 2011; Laín Entralgo, 1992) (Figure 4). He dedicated sections of his books to providing advice about basic care for newborns and babies on milk. It included the period of life from cutting the umbilical cord up to teething. He then studied, systematically and analytically, the childhood ailments causing the highest mortality rates at that time. His work is one of the pioneers in the speciality in Spain (García Nieto et al., 2011).

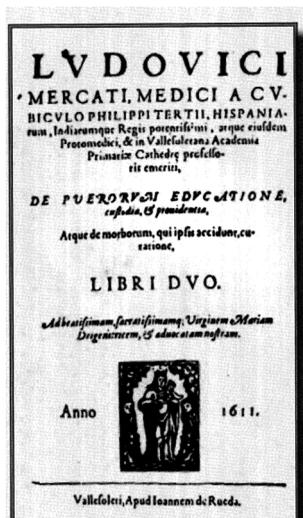


Fig. 3. Front of book by Luis Mercado



Fig. 4. Luis Mercado portrait by El Greco. Reproduction property of the signer.

Luis Lobera de Ávila and Francisco Pérez Cascales were also very important figures in the foundation of Paediatrics in Spain. Luis Lobera, doctor to Emperor Carlos I of Spain and V of Germany, is the author of *El libro del regimiento de la salud y de la esterilidad de los hombres y las mujeres y de las enfermedades de los niños y otras cosas utilísimas*. Published in 1551, it is viewed as a continuation of the work of Damian Carbó or Carbón. In Europe this book has been considered hugely important. Without detracting from this, it is worth noting that the book is not focused entirely on childhood diseases, although it is an important taster of what would come later and what has already been discussed (Rodríguez Tejerina, 1981). *Liber de*

*affectionibus puerorum, una cum tractatu de morbo illo vulgariter Garrotillo appellatur, cun duabus Quaesttionibus* is the masterwork of Francisco Pérez Cascales. Its more than 300 pages, published in 1611, include a discussion of topics such as: mouth ulcers, epilepsy, scalp infections, rabies, hydrocephalus, coughing, excessive sneezing, conjunctivitis and otitis ("sanies"), corneal scarring, intertrigo, suppression of urine, chilblains, smallpox and of course angina, differentiating between malignant and "croup". Unlike Luis Mercado, he did not look at issues relating to childcare and he justified the practical nature of his book on the basis of writing it after thirty years of professional practice. Pérez Cascales was particularly influenced by the so called "Hippocratic-Galenic tradition", as can be seen from his written work, and he was Professor of Medicine in the University of Sigüenza in Guadalajara.

In Spain, those condemned to death were killed using a "garrote vil". In essence, this involved the complete cutting of the spinal cord in the neck area, as a result of a large screw gradually being introduced into the back of the neck. This produced instantaneous death through suffocation. Francisco de Goya, an exceptional Spanish painter, and like Jerónimo Soriano born in Aragón, depicted this wonderfully in one of his drawings (Figure 5). As a result, childhood malignant diphtheritic angina was known as "garrotillo", since the death of the child was caused by suffocation induced by the diphtheritic membranes. Goya also signed the painting in which a doctor has his hands down the throat of a child, trying to pull out the deadly diphtheritic membranes (Figure 6). Pedro Laín Entralgo, born in the province of Teruel, a doctor, great humanist, and author of numerous books, who became President of the Spanish Royal Academy of Language, gave an accurate portrayal of this (Laín Entralgo, 1992).



Fig. 5. Garrote vil. *El garrotado*. Francisco de Goya. Reproduction property of the signer.



Fig. 6. *El garrotillo*. Francisco de Goya. Reproduction property of the signer.

Almost 300 years would have to pass before our academic authorities created the first Chairs of Paediatrics, uncoupling its teaching from Obstetrics. As ever, the population and the professionals moved with greater speed and more directly than those in power. Apart from some rare exceptions, the great initiatives in Spain have been driven by individuals and the population. As a result of the collapse of the Spanish empire, there was a drop off in scientific works and their publication in Spain during a large part of the 17<sup>th</sup> and 18<sup>th</sup> centuries. In Spain, the end of the so called "Golden Age" for Spanish arts, which accompanied the decline of its political role in the world, also negatively affected science. There are no known paediatric works by Spanish authors from the mid-17<sup>th</sup> century to the start of the 18<sup>th</sup> century (García Nieto et al. 2011; Laín Entralgo, 1992; Rodríguez Tejerina, 1981; Valle Sánchez et al., 2000).

For centuries children were one of the marginalised groups, along with women, old people and the mentally ill. Medical history paid them little attention. After several attempts in the 18<sup>th</sup>, 19<sup>th</sup> and early 20<sup>th</sup> centuries, involving, among others, Lorenzo Hervás y Panduro, Andrés Martínez Vargas, Manuel Tolosa Latour, Francisco Criado Aguilar, Rafael Ulecia y Cardona and Francisco Vidal Solares, attention for children became a completely medicalised area, where the only possible approach was medical. In 1789, Lorenzo Hervás (Arana de Amurrio, 2000; García Nieto et al. 2011, Laín Entralgo, 1992; Rodríguez Tejerina, 1981; Soriano, 2000; Valle Sánchez et al., 2000), following the doctrine laid down by Jerónimo Soriano, set out the need for there "*to be doctors dedicated to curing children's diseases, to educate the children well about physical matters*".

During the 18<sup>th</sup> century, there was a re-emergence of interest in childhood diseases. Gaspar Casal masterfully described "*pellagra*", a disease caused by deficiencies due to the diet in

his native Asturias which was based almost exclusively on corn. This deficiency in the intake of niacin, or nicotinic acid, which he called "*mal de la rosa*", devastated the North of Spain until 60 years ago. In 1762 he also carried out an exhaustive study of whooping cough and its complications (Arana de Amurrio, 2000; Laín Entralgo, 1992). In 1787 we start to see the first glimpses of Paediatrics becoming organised in Spain. An ordinance to control the courses given at the San Carlos School of Surgery in Madrid proposed breaking childhood pathology training into three parts: processes relating to newborns, diseases suffered by babies from 40 days after birth to teething, and the pathology of children up to seven years old (Laín Entralgo, 1992). The foundations for the study of Paediatrics in Spain were laid in the period known as "The Enlightenment". In this era the governing class made famous the phrase "everything for the people, nothing by the people". Even so, it was an interesting era, with the Borbon dynasty now in power, in which Spain recovered part of the prestige lost during the reign of the two final kings from the Austrian dynasty, Felipe IV and Carlos II, so far and so different from their brilliant predecessors, particularly Carlos I and Felipe II, who inherited the incisiveness and shrewdness of Fernando "The Catholic", the first King of Spain.

The greatest change during this century was the introduction of practices to prevent infections, with the discovery by the Englishman Edward Jenner (1749-1823) of a vaccination against smallpox. Spain was the most enthusiastic nation in welcoming this discovery. In 1803 the ship "*María Pita*" left the Spanish coast on an expedition led by the doctors Francisco Javier de Balmis and Francisco Salvany. Their sole aim was to take the prized vaccine to the Spanish overseas territories. This expedition was supported by King Carlos IV de Borbon. Given the long duration of the journey they needed to have enough people to inoculate with the vaccine lymph over the period. This is because the only way they knew of conserving it was direct person to person inoculation. The solution to this was to use children from the "*Inclusa*" (Orphanages) in Madrid and other Spanish cities. The *Inclusas* were centres that took in the children of single mothers and those whose families could not look after them. They took on board 22 children and when the pustules of one child were about to clear up they would take material from them and inoculate another child. Thanks to this inventive idea they were able to carry out the wide scale vaccination of the indigenous, Creole and Spanish populations in all the Spanish territories in America, the Philippines, and the Visayas, Macau and Canton islands, in China (Arana de Amurrio, 2000; Laín Entralgo, 1992). Although from a modern perspective many of Spain's actions when it conquered the Americas were reprehensible, this does not mean that everything it did was bad. Far from it, examples such as the mixing of races and cultures between the two worlds and Doctor Balmis' expedition are proof of this. A decade ago the Spanish Paediatric Association quite rightly organised the "Balmis Award" in memory of what was a hugely important scientific event in its era. This was created by Prof. Alfonso Delgado, Professor of Paediatrics and at that time President of the Spanish Paediatrics Association.

In the 18<sup>th</sup> century people started to see children as the seeds of society and this led to the view forming that they needed to be looked after. The education, feeding and care of abandoned children and awareness of the source of many diseases were the four basic areas of concern among the most enlightened and humanistic people of the era. Among these, the aforementioned Jesuit Priest Lorenzo Hervás y Panduro stands out. The abandoned children, the "*expósitos*", are a cause of debate. The fact that Children's Homes, called "*Hospicios*", existed, and that they survived in Spain until half a century ago, is commendable, but their conditions and the lack of financial resources to maintain them

were horrendous. The treatment received by the children was dreadful and they were subjected to all sorts of abuse. Some intellectuals and politicians finally became involved in trying to pass laws to protect children and adolescents. These laws were never put into practice. Once again the ruling classes ignored the reality of their people. There were even attempts, to avoid the terrible morbidity and mortality rates in the "*Hospicios*", to home children in private houses in return for a financial payment, but the abuses and mistreatment continued to take place in these houses. They also tried to recruit a large number of "*nodrizas sanas*" (*healthy wet nurses*) to feed the abandoned newborns and babies still on milk. These "*nodrizas*" were initially required to be healthy and upright citizens, but in the end women of all types ended up entering the "*Hospicios*": sick women, prostitutes, etc. They transmitted serious illnesses and caused the death of more than half of the children admitted (Arana de Amurrio, 2000; Laín Entralgo, 1992).

#### 4. The early stages

Modern Paediatrics did not start in Spain until the early 19<sup>th</sup> century. Scientific advances influencing the professionals of that era, combined with their exemplary dedication, drive and courage, ensured that the "flame" of Paediatrics, kept alive over the preceding centuries, with caring for children as its hallmark, came to fruition and the authorities became involved. In 1802 the "*Hôpital des Enfants Malades*" was founded in Paris, but we would have to wait until 1876 for the "*Hospital del Niño Jesús*" to open in Madrid. This is still a first-class hospital today. Its patron was the Duchess of Santoña and it was officially opened by King Alfonso XII de Borbón. The institutions were finally present at an event of this sort, one which was a breakthrough and a new development: the authorities began to involve themselves in childcare. However, the initial drive still came from the professionals and wealthy benefactors. In Barcelona, the "*Hospital de Niños Pobres*" was built thanks to the concerns of Doctor Francisco Vidal y Solares, the "*San Rafael*" was opened in Madrid and staffed by members of the Order of "*San Juan de Dios*", and one was built in Chipiona (Cádiz), at the request of Doctor Manuel Tolosa Latour.

Worthy of special mention is Doctor Francisco Vidal y Solares who founded the "*Gota de leche*" in Barcelona in 1890. The idea was a success and fourteen years later, at the initiative of Doctor Rafael Ulecia y Cardona, another similar institution was opened in Madrid, after which these centres were gradually opened all across Spain. The idea was great. These centres were involved in caring for children, which they did by collecting milk from donors and "*nodrizas sanas*", with the maximum health guarantees. The milk was then stored at the correct temperature and subjected to a sterilisation process before being placed in bottles and fed to the children in need. They also educated mothers on how to look after their children. In those days, if the families could not afford to pay for a wet nurse, almost all of the children from humble families whose mothers could not breast feed or had died in childbirth would themselves die. Infant mortality at that time in Spain, during the first year of life, was 250 for every one thousand born alive: terrifying but real statistics. Doctor Francisco Criado Aguilar was the first Professor of Paediatrics at the University of Madrid and ran a clinic in San Carlos Hospital toward the end of the 19<sup>th</sup> century. Doctor Manuel Tolosa Latour, a tireless campaigner, was behind the first official guidelines to protect children (Laín Entralgo, 1992).

After more than 100 years, this idea is now being reintroduced and several Spanish regions have seen the arrival of "*Bancos de leche materna*" (Breast milk banks), as if it were a new idea,

an advance, and without public acknowledgement of its inventors who in technically very difficult conditions, without financial support and with great generosity, started and disseminated the idea over many years.

Reviewing some medical books published during the 19<sup>th</sup> century, there were already chapters dedicated to attending to and looking after children, with a description of the main illnesses known. What draws the attention is the clinical clarity with which the symptoms and signs of the childhood diseases are described. This all has the added value of them being general medical and surgical books. So children were considered as different from adults from a medical point of view, which was a great advance and new development (Baldivieso, 1871; Ramos y Luengo, 1821). The author has even been able to find from that era prescriptions for children signed by doctors who were practicing in the towns of the province of Teruel (Figure 7). What draws our attention is the main active ingredients used: opiates and vegetable extracts. In another prescription we can find digitalis. Few pharmaceuticals were effective in those days.

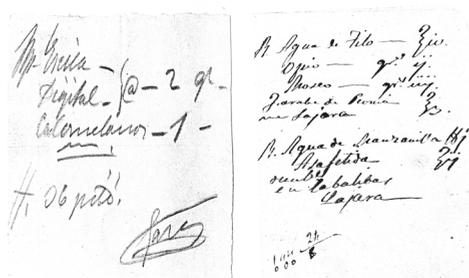


Fig. 7. Prescriptions for children. 19<sup>th</sup> Century. Provided by Ms. María José Doñate

One great scientific individual is Andrés Martínez Vargas, born in Barbastro, in the province of Huesca (Aragón), in 1861. After studying at the University of Zaragoza, he went to the United States to specialise in Paediatrics under the supervision of Professor Jacobi. He was appointed Professor of Paediatrics at Granada and subsequently performed the same role in Barcelona. He was a fascinating person, but controversial to some. His love of Spain did not please some members of the Catalan bourgeoisie. His activity was vast and ground breaking until his death in 1948. Gifted with a great intellectual capacity and a boundless curiosity, he worked intensively in this speciality. Author of numerous books and treatises, of countless articles published in first-class journals, and founder of many journals for his speciality, kindergartens, he was the first Spanish paediatrician to travel to many international conferences, sharing his knowledge (Figure 8). He even founded the "Instituto Nipiológico" in his native city in order to educate fathers and mothers in the comprehensive care of their children. As a result of this Institute, infant mortality in Barbastro reduced by 50% in seven years. It is also acknowledged that he was the first Spanish paediatrician to regularly publish in English. In fact, in April 1890, in "The Archives of Paediatrics", from Philadelphia, he published the first known article by a Spanish paediatrician written in English ("Adherent vesical calculus in a child. Clinical history and general study of the question"). His "Tratado de Pediatría" and "La Historia de la Pediatría en España", along with others of his works, were used as teaching resources for his students and for many generations of doctors in Spain and Spanish speaking America. He also founded the Spanish

Paediatric Association in 1901 and was the president of the three first Paediatric National meetings. He had an excellent relationship with many of his colleagues, particularly with Professor Sarabia Pardo, another great figure. Jerónimo Soriano amazed him and after reading his treatise he wrote a long article about his work, dated 1901, which appeared in the “Anales de Medicine et Chirurgie Infantiles” in Paris. From the start of his hospital activity, he managed to find specific rooms in the hospitals that could be used to see children and adolescents. He is considered to be the father of modern Paediatrics in Spain (Lain Entralgo, 1992; Grupo de Trabajo de Historia de la Pediatría de la AEP., 2010) His energy, strong character and ability to fight meant that he was not always understood, as is the case with all innovators who are ahead of their time. This makes his legacy all the more impressive and increases our gratitude for his masterwork.



Fig. 8. Fronts of journals founded by Dr. Martínez Vargas. Portrait of him.

## 5. Early development

The first Spanish Paediatrics Professorship in San Carlos Hospital in Madrid, created in 1866, the enactment of the “Child Protection Law” in 1904, and the first three Paediatrics Conferences in Palma de Mallorca (1914), San Sebastian (1923) and Zaragoza (1925), confirmed the arrival of our speciality (Labay Matías, 2010). Later on, academics such as Arce, Laguna, Ramos, Lorente Sanz and Suárez, among others, kept alive the flame of Paediatrics under difficult circumstances. After the unfortunate Spanish Civil War, from 1936 to 1939, there was widespread poverty among the population. There were insufficient resources and the Clinical Hospitals, reliant on the Universities, did not have the appropriate technology. Many children would die due to a lack of medical care. However, in 1908 the *Instituto Nacional de Previsión* (National Institute of Social Welfare) had been founded so that the working and lower classes could receive some financial support on retirement. In 1942 they added “*Seguro Obligatorio de Enfermedad*” (SOE) (Compulsory Health Insurance), which was the start of medical care for all Spaniards. For example, rural doctors were originally paid their monthly salary by the local Councils: with the SOE, the system changed and they were paid by the State. Hospital care was provided in charitable hospitals, in those connected to the Universities, or in private clinics. The 1950s saw the start of the construction of newly built hospitals in all the provincial capitals and heavily populated areas in Spain, paid for by the SOE. For the first time in the history of Spanish medicine these hospitals were given the appropriate human and technical resources for that time. The Hospital Obispo Polanco in Teruel, the second constructed in Spain, was opened

in 1953 by the SOE (Figure 9). An old manager at the Hospital in Teruel told how a famous German professor, invited to Valencia in 1954 to give a couple of conferences, was driven to Teruel so that he could see a modern hospital, since those in Valencia were not presentable. Valencia is the third largest Spanish city in terms of population, but its new hospital was still being constructed. It is true that initially children were not included in the hospital care system. It looked after mothers during childbirth and the only specialities included were the surgical ones for adults. Farmers were excluded, but it was a start. Only some Centres such as the "Casa de Salud of Valdecilla" in Santander, and the old hospitals mentioned above, cared for children in a way that was appropriate for that time. In this context it is worth mentioning Professor Guillermo Arce, who disseminated his wisdom from Santander, creating a school of paediatrics which was very well known for its quality. Apart from some exceptions, there was no guarantee of "excellence" in the training of paediatricians: They would acquire qualifications as best they could. One should also mention the foundation, at this time, of the Childcare Schools which at least guaranteed that doctors had some basic ideas about children (Fleta Zaragoza, 2009; Sánchez Martín, 2007). From 1960 many brilliant specialists, many happily still with us, have been focussing all their energy and thinking on providing an extraordinary service to society in general and to Paediatrics in particular.



Fig. 9. Hospital Obispo Polanco, inaugurated in 1953. Teruel, Spain

## 6. The golden age

When analysing the past we can identify five fundamental events that have contributed to the development of paediatric care in Spain: the creation of the old National Institute of Social Welfare (1908), with the establishment of the aforementioned Compulsory Health Insurance (SOE) in 1942, the predecessor of the National Health Institute (INSALUD); the implementation of the Medical Residency Training (MIR) system for training graduates in Medicine and Surgery (1974); the creation of children's hospitals with the beginning of the paediatric specialities (1964-80); the General Health Law (1986); and the design of the Primary Health Care System (1986), which was largely the brainchild of the academic Segovia de Arana. These events led to a change from the "quota" of outpatient paediatricians, with a consultation time of two and a half hours and 10 hours on alert for

home visits, to the situation that exists today. In the new care model we have Paediatric specialists working alongside the family doctors in the health centres (Labay Matías, 2010). Curiously, in Teruel Jerónimo Soriano founded, and maintained at his own expense, the first recorded hospital dedicated entirely to disadvantage children: another great action by this exceptional person (Labay Matías, 2010). The creation of the Children's Hospitals in the main Spanish cities was a giant leap forward in terms of caring for children. The paradox was that these Hospitals were much better equipped than those attached to the Universities. In addition, with them we saw the start of the paediatric specialities that led to unstoppable advances in the level of care. The best specialists trained in Spain and overseas were attracted by the potential for professional development. These Hospitals began during the Franco dictatorship and culminated with the happy arrival of democracy in Spain, brought about by the efforts of the public, by intellectuals and by politicians full of generosity such as Adolfo Suárez. They were all protected by King Juan Carlos I de Borbón.

The aforementioned INSALUD turned out to be a highly effective organization and contributed decisively to the development of Spanish medicine and paediatrics. It was also concerned about ensuring that the University Hospitals and their Paediatric Services had the necessary resources.

The author can remember the first National Meeting of the Society of Intensive Paediatric Care, held in Bilbao in 1977, and led by Dr. Xavier Allué and Dr. María Teresa Hermana. This decade saw the spectacular development of all the paediatric skills in the INSALUD network Children's Hospitals.

In this golden era for our speciality, the people who stand out, among many others, are Ernesto Sánchez Villares (Professor at the University of Valladolid), Ángel Ballabriga Aguado (Head of Paediatrics and Professor at the University of Barcelona in the Valle de Hebrón Hospital in Barcelona) and Juan Rodríguez Soriano (Head of Department and Professor at the University of the Basque Country in the Hospital Infantil de Cruces in Bilbao). The first of these instilled in his students the need to specialise in the different paediatric areas (Sánchez Martín, 2007). The second, born in Naval, a province of Huesca, (Aragón), was tireless in his efforts to introduce into his hospital and others the new child-related trends and techniques. Professor Ballabriga, who had great intelligence and vision of the future, wrote 20 years ago: "The development of paediatrics in Spain since 1975 has been enormous thanks to the generosity of the professionals. However, we have not been able to achieve all the milestones initially planned, and what we need is for our administrative systems, both central and regional, to be less arrogant, less dogmatic, less bureaucratic, more flexible, more capable of accepting criticism and more cooperative with the professionals who still maintain a scientific spirit and enthusiasm". He also, with his characteristic sarcasm, complained about the official recognition of the paediatric specialities, when in 1992 he wrote about our healthcare system: "...in spite of all of this we still feel happy!, because for the moment when we are sick we can go to our National Health System (NHS) doctor. Perhaps in the near future we will be obliged to go first to our NHS economist!" (Argente Oliver, 2011). These assertions are still the reality at the current time, but the outlook has become even worse.

Few people know that Professor Juan Rodríguez Soriano (Figure 10) was coincidentally born in Zaragoza because at a very young age he moved to Barcelona. He always considered

himself to be Catalan, but he had a special fondness for his city of birth. It is safe to say that, of all the Spanish paediatricians throughout time, he is the most famous in the scientific world thanks to his contributions to Paediatric Nephrology. After graduating he trained in Paris and the United States. He described renal tubular acidosis, contributed to improving awareness about Bartter's Syndrome, published more than 100 highly-rated scientific articles in English, and took part in many editions of Nelson, being involved in the nephrological aspects. An ardent defender of the paediatric specialities, his Paediatric Department was the prototype for modern medicine, involving collaboration with great minds coming from all over the world. Gifted with easy and forceful eloquence, with a superlative intelligence and with a personality that affected all who met him, he devoted himself body and soul to his work. The author was lucky enough to train as a resident doctor (MIR) in his hospital. All of us resident doctors were impressed by his knowledge, which spanned the whole of Paediatrics. The daily clinical sessions were a pure intellectual delight. Towards 1980 we saw the introduction into Spain and Europe of a new baby milk formula. After a few months babies started to arrive in the emergency rooms at the hospitals showing signs of neurological affection and some died. Professor Rodríguez Soriano observed that all of them were suffering from metabolic alkalosis, with very noticeable changes in blood electrolytes and in gasometries. All of them were being fed that milk formula. With the help of his team of collaborators he analysed its composition, detecting significant imbalances in the ions. He contacted the laboratory that manufactured it, explaining his findings and asking for the milk formula to be removed from sale. Given the refusal of the company and the treatment he received, he published his findings immediately. He received the unanimous support of the entire international scientific community and of the Spanish Paediatric Association. The formula was then withdrawn from the market. As a result, many babies around the world owe him their life. His career was an example of what science must be, which is always there to serve society. The entire international scientific community lamented his death. His friend Professor Manuel Bueno, another great name in Paediatrics, dedicated an accurate and moving article to him in 2011 (Bueno Sánchez, 2011).



Fig. 10. Prof. Dr. Juan Rodríguez Soriano (1933-2010)

We cannot forget to mention Professor Cruz Hernández, professor at the University of Barcelona and author of the best modern Treatise on Paediatrics in the Spanish language.

His scientific work is of the first order. His book is the Spanish Paediatric Association's official treatise.

The system for training specialists in Spain, which as has been mentioned was very deficient, changed radically with the introduction across Spain in 1974 of the post-graduate training system, for those graduating in Medicine, known as the training plan for resident physicians (MIR). Thanks to that, the quality of the qualifications available in Spain has reached enviable heights. The current system involves, after a testing entry exam, 4 or 5 years of training for a speciality. Since its implementation it has resulted in very high quality healthcare in Spain. Infant mortality during the first year of life is currently around 3 per thousand born alive. The Spanish National Health System is considered one of the five best and most efficient in the world. This is true to such an extent that we have what is called "health tourism", where people from many countries throughout Europe come to have their complaints treated in Spain.

The transfer of health care to the Autonomous Regions, which culminated at the start of this century, is another factor to take into account. The much missed Minister Ernesto Lluch, Julián García Vargas and Ana Pastor are three politicians who in their time helped to develop Spanish medicine. The General Health Act, created twenty five years ago by Minister Lluch, resulted in the extension of high quality healthcare to the entire Spanish population, subsidised by the General Spanish State Budget. Among other things, it ensured that children would be seen by paediatricians up to the age of 14, instead of the previous 7. Years later Ernesto Lluch was sadly assassinated by the terrorist group ETA. Julián García Vargas understood his work as an act of service to the Spanish population. During his years in charge he periodically organised meetings in the Teruel Parador Hotel, in which he met with social and political representatives so that he could listen to suggestions and keep in touch with the reality. This was called "*the spirit of Teruel*". Both belonged to the Spanish Socialist Worker's Party (PSOE). Ana Pastor, of the Popular Party (PP), was capable of fulfilling her role during the difficult period in which health issues were being transferred to the Autonomous Regions, despite not being very convinced that this was the best solution for healthcare (Labay Matías, 2010). To summarise, from the end of the 1960s to the arrival of the 21<sup>st</sup> century, healthcare in general, and paediatrics in particular, experienced the golden age of the Spanish National Health System.

The increase in the level of Primary Care meant the creation in almost all Spanish hospitals of paediatric specialities. These have become indispensable to society due to the excellent work of the paediatricians in the health centres.

Today Spanish society has a high quality paediatric service which can comfortably address the needs of children and adolescents. The generosity and self-sacrifice of its professionals is the cornerstone to this situation (Labay Matías, 2010).

## **7. The future and its uncertainties**

On the horizon we can make out some concerns, certain changes, and the risk of not improving on what we already have (Cruz Hernández, 2010; Labay Matías, 2010). The impression is that paediatric care is more highly valued by the public than by the politicians and administrators (Pérez Tirado et al, 2010). Our speciality does not have the waiting lists

seen by others, and the number of admissions of children and adolescents into the hospitals are limited and involve brief stays. The main focus is always the wellbeing of the child, and they are allowed home early, providing the results of the tests carried out in the hospital appointments. We are probably the most clinical of all the specialities. As soon as the symptoms and signs improve, the child is sent home. This does not happen in other medical areas, where the patients remain in hospital until the final complementary tests have been completed. The right thing is done, but this is not appreciated by the health authorities who are guided by the number of people admitted, the occupation index, the reduced waiting lists, etc.: quality is not taken into account. Not taking time off after being on call so that they can continue working or providing consultations, interrupting holidays to look after children.....these are common practices for many Spanish paediatricians. Primary Care is visited by many children outside normal surgery hours and as a result there are no delays in receiving care. Each day high quality medicine is provided in all possible areas: curative, preventive and social (Fernández Pérez et al., 2003; Haagan, 2009; Martínez González, 2010; Pérez Tirado et al., 2010). The paediatricians involved in this form the very heart of our health care model. It has been shown that paediatricians in health centres request less complementary tests and write less prescriptions for medicines for children than are requested and written when the children are seen by other professionals (Buñuel Álvarez et al., 2010).

This dedication and self-sacrifice, following the path carved out by Jerónimo Soriano, is starting to count against our speciality. In many Paediatric Services, severely ill children and those that are complicated to manage come on demand to the hospitalisation floor to receive medical attention, which generates a considerable "hidden care" which is not taken into account by the administrators (Labay Matías et al., 1994). For the politicians, our speciality is a minor issue because it does not cause them any problems. In the Spanish Public Health System there seems to be an unwritten rule that penalises its most loyal and hard working professionals.

The transfer of health care to the Autonomous Regions has improved certain aspects of care, but only at the cost of a considerable increase in the political, management and administrative structure, which we consider unnecessary and excessive. They have become impervious to each other and to professionals. In some, if comments made by colleagues are to be believed, the health care politicians in charge do not know the range of services offered in the hospitals by the Paediatric Services. This range of services has been repeatedly mentioned to the administrators. "*Primum non nocere deinde filosofare*", said Aristotle. It is dangerous for politicians to make decisions about our speciality without being aware of the current reality. They must justify their positions and actions to society as a whole and to the health care professionals. Without these premises they do not have enough credibility. As a result of all this they could cause irreparable damage to Paediatrics. With the transfer of healthcare from the State to the 17 autonomous governments in Spain, finalised in 2003, the healthcare system in Spain became very peculiar. Each Autonomous Region decides on its own IT system (each incompatible with the rest), children's medical cards, calendar of vaccinations and range of services offered to the public which vary depending on the Region. To receive attention in another Community people must deregister their health card in their place of residence and register in the other place where they are a patient, even if this is just for one day. In Spain there is an expression used when everything divides up:

*“Son reinos de taifas”*, which can be roughly translated as “they are taifa kingdoms”. This alludes to the fact that the Muslims in Spain were powerful while the Caliphate of Cordoba kept them united, up to the 11<sup>th</sup> century. Once cracks appeared, small Muslim kingdoms, called “taifas”, sprung up throughout their territories. This decline of the Muslims allowed the Christian Kingdoms at that time to reconquer the whole of Spain. The same has happened with school education, with the negative consequences being borne by Spanish children and young people.

In the light of the risks that could be faced by Spanish Paediatrics in the future, one must act sensibly and vigorously (Cruz Hernández, 2010; Labay Matías, 2010). All paediatricians, regardless of ideology, professional activity or residency, have to be capable of uniting behind a sole common objective: to preserve and improve the care of Spanish children and adolescents. I am convinced that the Management Board of the Spanish Association of Paediatrics, with the Regional and Paediatric Speciality organisations, are the most qualified to act as spokespeople representing us in the face of public opinion, and to the politicians and unions. Our President, the academic Serafín Málaga Guerrero, must be able to rely on our unconditional support when it comes to some basic areas. His successors will deserve the same support.

In the opinion of the undersigned, close cooperation between the Primary Care and Specialist professionals is fundamental. The specific core subject of Paediatrics must be respected. The MIR medical post-graduate training system is untouchable: it can be improved but never reduced. Having shown its effectiveness over the decades, it would be a huge error to dispense with it or limit its duration and content. The specialities are vital for the development of Paediatrics and as a result must be strengthened as much as possible (Cruz Hernández, 2010; Labay Matías, 2010; Martín Mateos, 2010). There is probably no risk for those looking after seriously ill children: Neonatology, Neonatal Intensive Care, Paediatric Intensive Care, Paediatric Surgery and Oncology. Very sick children scare people and will be left in our hands. Other branches of Paediatrics could be swallowed up by other specialities or see themselves reduced to a bare minimum. This goes against the current approach taken in Europe, to which Spain belongs (Cruz Hernández, 2010; Labay Matías, 2010; Martín Mateos, 2010). It is impossible to forget the efforts made in this field by academics such as Sánchez Villares, Ballabriga, Peña, Cruz Hernández, Rodríguez-Soriano, Bueno, Delgado, Crespo, Málaga, Argente, Pérez-Yarza and many more. This entire brilliant generation has set out an unalterable path for us. The paediatricians trained through their teaching are the current leaders in our specialty. The undersigned remembers meetings chaired by the lecturer Rodríguez-Soriano and Doctor Bezanilla Regato in the Hospital Infantil Universitario de Cruces children's hospital, and involving residents finishing their second or third year of MIR, at the point of selecting a speciality. Many of these students are now well known experts in different branches of paediatrics. That vision of the future, which existed in the children's hospitals during that time, has raised the level of the specialities and paediatrics in Spain and allowed professional excellence to be attained. This scientific treasure cannot under any circumstances be lost. It is essential for the future and for progress.

People with other qualifications cannot be allowed to hold posts in paediatrics as they do not have enough knowledge of the area. The politicians, in Primary Care, may be assessing the option of importing health care models in which paediatricians do not play a full part

because they do not exist: the care of children and adolescents would be taken out of our hands. In fact, if the important thing is efficiency and results, we should be offering and exporting our health care system to other countries. If paediatricians gradually disappear from health centres it would result in a drastic reduction of the current quality and the start of the dismantling of an exemplary health care system, which is less expensive than in other parts of Europe because of the salaries of the Spanish doctors. Who would benefit from this?: not the public of course, but private medicine would. It would mean turning back the clock 60 years in terms of the social benefits and what we call the welfare state.

It is surprising that there is no common Children's Health Book for all Spanish children, with calendars of specific vaccinations in keeping with the guidelines in the 17 Autonomous Regions making up the country. The IT system in the Autonomous Regions must be the same. In the list for access to posts, medical knowledge must take precedence over all other aspects in all Communities. Even when it comes to medical positions of responsibility, such as heads of service and section, politics with a small p is interfering. The Ministry of Health's Inter-Regional Board must make some decisions and cease to be a fictitious organisation without a real role. The Ministry of Health must justify its existence and its actions. The Inter-Regional Board has currently been reduced to a mere consultative body, without any decision making or coordinating powers, and the Ministry of Health lacks control, with practically everything being in the hands of the Autonomous Regions. This is what leads to its zero control of management and decision making. A health care agreement must be imposed in Spain; one in which all the political parties and professionals have a say. There must be a debate on many issues and decisions need to be taken, including those on the joint financing and creation of a new health model which more effectively meets current and future needs. The health system does not belong to any one political party; it belongs to the public who pay for it through their taxes. The politicians are there to serve the people they represent and to whom they are accountable for the running of the country. Health care administrators must be professional posts and not political ones. It is incomprehensible for the Hospital and Primary Care Directors, for example, to be appointed and removed on the basis of the political party in power in the Autonomous Regions.

The age for receiving Paediatric care must be increased to 18 years: we are more familiar with the problems of these young people than other specialities (Labay Matías et al., 2006). Demands must be made for the Ministry of Health to provide real figures about the current and future need for paediatricians and doctors, and for the Universities to act on this information. It is difficult to accept that such data is not available and that there are no figures on the short, medium and long term requirements for professionals within the existing bureaucratic structure: what are the politicians and administrators doing with their time?

Foreign doctors are currently needed and they are welcomed with affection and respect. Almost 16,000 work in Spain, as a result of the Spanish Universities producing very few doctors (Labay Matías, 2010). Many of them take advantage of their time in our country to specialise while they work, putting themselves forward for the MIR exam. Have they all faced the difficulties that the Spanish students have in accessing our Universities? In the 2010 exam almost 50% of the doctors registering were from outside the EU and in 2011 the figure was 35%. Many of them go back to their countries after finishing their MIR. In the meantime, the Spanish State has invested €200,000 in training each of them, which in these cases is a waste of financial resources. As a result, there is a risk that the Spanish students

finishing their medical degrees will have problems in accessing MIR training and obtaining a specialist position in Spain. It is also hard to understand why, with the real need for doctors in Spain, the Universities do not increase the number of degree course places for this profession in such high demand in our country. The percentage of paediatric posts unfilled or being carried out by a doctor without the appropriate qualifications is 33%. The real reason is that the Ministry of Education is almost entirely powerless, since it has assigned its powers to the Autonomous Regions whose politicians do not normally have enough personal or intellectual capacity or a vision of the future. Unfortunately, politics in Spain is in the hands of many people whose main merit is following the orders of their superiors, since there are many who have no previous profession or studies to demonstrate their worth. They are bound to the senior members of their political parties, but not to the population.

Of the Spanish population, 13% are immigrants. As many are without resources or work, they receive financial aid from the Government and have the right to receive the full range of healthcare services. This has led to the healthcare system becoming overstretched at every level. The author has complete respect for immigrants, who he sees and helps as best he can. This does not stop him from understanding that the immigration policy in Spain has been mistaken over the last few years and that it may result in some unforeseen consequences.

According to published data, the Spanish healthcare system owes €15bn to suppliers and is on the point of financial meltdown. This is partly due to the Autonomous Regions taking on much more debt than they can cope with, often without good reason. People are starting to understand that what we call the “welfare state” has to be maintained by everyone, and that the politicians are responsible for mispending public money received from the taxpayers’ pockets. There is now talk of the transfers in education and health having been a political and financial mistake<sup>25</sup>. In Spain, another democratic State was built on the structures of General Franco’s totalitarian state, superimposed on the original one. This has led to administrative and political infrastructures that are overloaded and unsustainable for the Spanish population. What might have made good sense thirty years ago needs a wholesale review at this time. As a result, all the political parties must plan to completely remodel the current State system. According to official polls, politics is the third most worrying thing for the Spanish population, after the terrible unemployment problem and the management of the financial crisis by the Government (Usera et al. 2011).

The Official State Bulletin of 23 May 2011 contained a Ministry of Employment and Immigration Order (TIN/1362/2011) which has specifically prohibited, since 1 July, without any alternative, professionals who retire from continuing to provide services on their own behalf. This affects doctors, architects, lawyers and other groups. This means that 500,000 Spanish professionals aged 65 years old and upwards, in full possession of their mental faculties, have to stop working and cannot contribute to the State through their private activities. As a result, many clinics, consulting rooms and offices will close, with the result that the employees will lose their jobs and swell the numbers of the unemployed. Since 1986, doctors and paediatricians working for the public system who also have their own private practice, which they run in the evenings while strictly complying with their public duties and schedules, receive €12,000 a year less than their counterparts who work exclusively for the public sector. The aforementioned Ministerial Order, which has caused outrage, has been widely challenged by the political parties, Professional Bodies and other organisations,

but this Ministerial Order has been suppressed in order to avoid massive resignations of brilliant professionals. It is yet another example of the fact that in Spain some politicians do not think sensibly or wisely. The Spanish present politic scenario has been masterfully analyzed by Arturo Pérez- Reverte, extraordinary writer and member of Spanish Royal Academy of Language in a recent article (Pérez-Reverte, 2011).

## 8. Conclusion

As argued by Varela (Varela et al., 2010): *“to advance in terms of continuous improvement everything must be negotiated and shared between professionals and managers”*. This is not common in Spain. We must be united in defending Paediatrics in Spain, which means defending top quality care for our children and young adults but still thinking about the future, not being afraid of change as long as it results in an improvement to what already exists. This must be our legacy, what we leave for those who are coming after us. More than 400 years of history and effort must motivate us to continue along the path shown by our grand masters. In defence of Paediatrics (Cruz Hernández, 2010; Labay Matías, 2010; Martín Mateos, 2010), united to the end. Not everything was better in the past, but the future must be (Cruz Hernández, 2010). Children and adolescents always have the right to receive care from paediatricians and specialists from the different areas of paediatrics (Elías Pollina et al., 2011; Labay Matías, 2010; Málaga Guerrero 2011). Between all the groups: the public, politicians, managers, professionals and the unions, a way must be found to ensure that Spain continues maintaining and improving its enviable National Health System, for children and the entire population. I am convinced that the spirit of Jerónimo Soriano is with us, encouraging us to complete the wonderful adventure that he began: caring for children.

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