

HISTORY AND HUMANITIES IN DERMATOLOGY

Centenary of the Fontilles Sanatorium

J. Terencio de las Aguas

Honorary Medical Director of Fontilles. Member of the International Society of Leprology. Fellow of the Valencian Royal Academy of Medicine, Spain.

Abstract. In recognition of the centenary of the Fontilles Sanatorium, we present some details of its history. The article discusses the foundation of the sanatorium by some of the numerous lepers with no health coverage in the region of Valencia, and Alicante in particular. After a difficult period between 1909 and 1932, the sanatorium was seized by the Republican government. After the civil war, it was returned to the board of trustees, who entrusted administrative tasks to the Compañía de Jesús while health care was overseen by the National Health Board. This coexistence was uneasy, and the board of trustees took over again in 1943. We comment on the transition from a sanatorium and colony into a hospital providing health care, research and training, and treatment with sulfones and subsequently other effective drugs. Also discussed are its role in the elimination of leprosy from Spain, admission to the International Federation of Antileprosy Associations in 1969, and its projects in endemic countries, with the ultimate goal of achieving a world free of leprosy.

Key words: Fontilles, Centenary.

HISTORIA Y HUMANIDADES EN DERMATOLOGÍA

Resumen. Con motivo del Centenario de Fontilles, se exponen las circunstancias históricas de su fundación por los numerosos enfermos sin asistencia en la región valenciana, sobre todo en Alicante. La primera difícil etapa de 1909 hasta 1932 (año en que se produce la incautación por el gobierno de la República), la Guerra Civil y la devolución en 1941 a su propietario, el Patronato, encargando la administración a la Compañía de Jesús y el aspecto sanitario a la Dirección General de Sanidad, coexistencia que no funcionó y en 1943 vuelve a hacerse cargo el Patronato. Se comenta la evolución de la Colonia-Sanatorio hacia un hospital con función asistencial, investigadora y de formación, la aplicación de las sulfonas y posteriormente otros fármacos eficaces para la curación, el importante papel en la eliminación de la lepra en España, el ingreso en la Federación Internacional de Asociaciones de Lucha Contra la Lepra (ILEP) en 1969, los proyectos en países endémicos y la meta final de conseguir un mundo sin lepra.

Palabras clave: Fontilles, centenario.

Leprosy in the 19th Century

Leprosy became very widespread throughout Europe from the 7th and 8th centuries onward, as demonstrated by the more than 20 000 leprosariums and paleopathologic discoveries. A peak was reached in the 13th and 14th centuries followed by a decline caused by several factors, such as famine, other pandemics (plague, cholera, smallpox) and by improvements in the quality of life, isolation and, possibly, the appearance of mycobacterial antagonism due to the spread of tuberculosis.

The 19th century is very important in the history of leprosy, since this is when the science-based study of this disease began in Norway. Leprosy had been present there since the 9th and 10th centuries and underwent a significant increase at the beginning of the 19th century (some 2800 people were affected in 1856). This prompted a group of researchers at the Saint George Hospital, Bergen, led by Danielssen, to devote themselves fully to the study and classification of the disease. Danielssen subsequently published, with Boeck, an atlas on leprosy. His disciple Hansen—and against the general belief in the inherited nature of the disease, a belief shared by his master—succeeded in discovering the etiologic agent *Mycobacterium leprae*, in 1873.

Benito Hernando, the Director of San Lázaro in Granada, published *La Lepra en Granada (Leprosy in*

Correspondence:
José Terencio de las Aguas
Marqués de Campo, 37-3^º
03700 Denia (Alicante), Spain
drjoseterencio@hotmail.com

Granada) in 1881 and was visited by the German scientists Virchow and Neisser who studied mycobacterial staining at his hospital.¹

Spain was no stranger to this scientific current in the study of leprosy and the endemic disease itself that created such enormous terror, which even scientific and medical reports called “a horrible and terrible plague” at the time. For this reason, the Government, by the Royal Decree of 7 January 1878, appealed to the Royal Health Board to cooperate with the civil governors, health boards, and other functionaries in combating the disease in the face of numerous new cases in several Spanish provinces.

There was an increase in the number of people affected in the Valencian region, and several physicians who conducted the first statistical studies recommended the required hygienic and therapeutic measures. Juan Bautista Peset² was one of them. He reported an increase in leprosy in the northern part of Castellón and the Valencian districts of Gandía, Alcira, and Catarroja to the Provincial Health Board in July 1877.

Similarly, in 1886, Zuriaga, a Valencian dermatologist—at the request of the Valencian Regional Government—pronounced about its manner of contagion, how it spread, and the prophylactic measures to implement, insisting that it was a contagious disease and donated the “Mas de Fuster” estate, in the province of Castellón, for the construction of a lazaretto that failed to materialize.

It was in Marina Alta in particular, in the northern part of the province of Alicante, where the loudest warnings about the magnitude of the problem could be heard. Poquet drew attention to the rapid spread of leprosy in Parcent where, in 1849, there were no patients, whereas in 1887, out of a population of 800, 60 people were affected, adding his support to the idea regarding the contagious nature of the disease in his monograph *¿Es o no contagiosa la lepra? (Is leprosy contagious or not?)*

In 1888, Oswaldo Codina wrote in the *Fraternidad Médico-Farmacéutica* of Alicante, the article *La lepra en la provincia de Alicante (Leprosy in the province of Alicante)*³ in which he comments on the increase of the disease in La Marina, the need to isolate the patients who lived in caves and rural dwellings, the abysmal hygienic conditions in the villages, describing the disease as “terrible, with members corroded by the horrible elephantiasis,” and advocating the need for a leprosarium in this region.

Of note are the references to leprosy by Gabriel Miró in his novels *Del Vivir (On Life)* and *El Obispo Leproso (The Leper Bishop)*, describing perfectly the symptoms of patients from Parcent and Orba.⁴

Another study that accurately describes the seriousness of leprosy in La Marina was by Salvador Calatayud who, at the request of the Governor of Alicante, Alcalá Galiano, investigated in 1879 “the terrible illness in the town of Pedreguer” where he was the acting physician.

In 1879, he published an article entitled *Observaciones prácticas sobre la lepra (Practical Observations on Leprosy)*. The first part deals with the topography of the town, its climate, and agriculture, and the second part explores the issue of “the disease of San Lázaro,” beginning with the history of leprosy in the world, followed by the outbreak in Pedreguer where the first case involved a young man from Denia who died aged 21 years in December 1819. Furthermore, he records which families were the most affected and the number of deaths (57 cases) from 1810 to 1879, as well as those “invaded,” both dead and living, with a total of 74 cases (41 men and 33 women).⁵

In Spain, the first official statistics were recorded in 1851 with a total of 286 cases, and by 1878 the number of patients had increased to 521 with a clear preference for the Valencian region where there were 172 cases (Alicante, 64; Castellón, 52; and Valencia, 56), the worst affected region being La Marina, in the northern part of Alicante, creating a serious social situation among patients who concealed their disease or sought refuge in country dwellings or small lazarettos, such as those of Gata and Pedreguer.⁶

In 1887, the Government of Alicante suggested the construction of a 100-bed hospital in Parcent, one of the most endemic areas, and called a meeting of the mayors of Pego, Denia, Cocentaina, and Calosa d'Ensarrià in Pedreguer on June 12, which ended in deadlock. Thus, the end of the century arrived without the hospital which had been requested by scientists and politicians.

Leprosy in the 20th Century

The century began with the same problems as before and the appearance of new cases with 4 foci: the Levant (Catalonia, Valencia, and Murcia), Andalusia, Galicia, and the Canary Islands. The only hospitals in operation were those of San Lázaro in Santiago, Granada, and Seville, and the Leprosy Wing at San Juan de Dios Hospital in Madrid (which, according to Azúa, had 89 cases (15 cases from America and Africa) in 1916 and where Sánchez Covisa reported 136 patients in 1926, 30% of whom had acquired the disease outside Spain). Some rooms in charity hospitals were available, but the provinces of Valencia remained the most affected.

However, it was on December 15, 1901 when chance circumstances arose that led to the construction of the desired lazaretto. The Jesuit, Carlos Ferris, from Albal, Valencia, was presenting his missionary work in the town of Tormos in the region of La Marina while staying at the home of Joaquín Ballester, friend, lawyer, landowner, and philanthropist and who was to become his closest collaborator. One evening, after dining, they listened to wails and moans coming from the neighboring house



Figure 1. Fontilles sanatorium.

where a leper called Bautista Perelló lived alone and marginalized.

This incident made them aware of the large number of infected people in the area, as well as their atrocious living conditions and social rejection. From this moment they conceived the idea of constructing a sanatorium in the area, immediately beginning meetings with scientific institutions, physicians such as González Castellanos, and politicians, creating an organizing committee and beginning the long and hard stage of founding the Sanatorium-Colony.⁷

In 1902, a Trust with a Governing Board was set up as a civil and legal representative of the institution to recruit collaborators and seek donations, both in Valencia and in other Spanish regions. For over 1 year, the founders traveled the provinces of Alicante and Valencia looking for a suitable place for the leprosarium; on 9 January 1903 they discovered the Valley of Fontilles which belonged to the municipality of Vall de Laguar in the Pego district, very close to the town of Tormos where the idea was first conceived.

Difficulties began to arise due, on the one hand, to the biblical fear of leprosy, and, on the other, opposition led by Ruano Llopis, the health inspector for Ondara.

However, a group of physicians and politicians of various ideologies defended the excellence of the idea from the prophylactic, epidemiological, and social standpoint. This group was presided by Faustino Barberá, President of the Valencian Medical Institute, who requested the opinion of the most famous scientists of the time, including the Turk Zambaco Pacha, the Professor of Dermatology of Valencia Slocker de la Pola, Royo Vilanova, Peset, Pelegrín Casanova, Moliner, González Castellanos de Jávea, and many others. All greeted the idea with immense enthusiasm, since there were lazarettos in Gata and Pedreguer, and as the physician José Sivera had counted 11 cases in Murla.

In 1904, an important meeting was held at the Medical Institute of Valencia between the opponents and supporters of the foundation, where the idea of constructing the sanatorium was accepted; in fact work had already begun. The Organizing Commission published the book *Caridad heroica. Colonia-Sanatorio Nacional de San Francisco de Borja para los pobres leprosos (Heroic Charity. The National Colony-Sanatorium of San Francis de Borja for Poor Lepers)*,⁸ also in 1904. This presents the history of the disease, the opinions of various scientists and consultants, and describes the creation of provincial boards in various places in Spain to generate funds for the sanatorium, accompanied by copious illustrations.

On September 7, 1908, the Ministry of the Interior approved the project and offered support, and finally, on January 17, 1909, after 7 years of listening to the patients' moans, Fontilles (Figure 1) was inaugurated, supported by the charity of individuals, and admitting 8 patients on the same day. The Society of Jesus was entrusted with administration tasks and spiritual guidance in collaboration with the Tertiary Franciscan Sisters of the Immaculate Virgin and the monthly journal *Lepra (Leprosy)* began to be published. González Castellano, a physician from Jávea, played a major role in the foundation of the sanatorium publishing the plans in the *Revista de Gandía (Journal of Gandía)*, and presenting the idea at several congresses, although he encountered difficulties when the state did not contribute to its maintenance.⁹

Again in 1909, the Second International Leprology Conference was held in Bergen, Norway, attended by the Spaniards Tello—who presented the work “Leprosy in Spain”—and Azúa.¹⁰

In 1911, Faustino Barberá, President of the Valencian Medical Institute, conducted a statistical survey on the disease in the Valencian provinces with a total of 376 cases, 176 of them in the province of Alicante.

There are various reports on the first years of Fontilles, such as that of Bover Albi who, in his doctoral thesis of 1913, *De la lepra en España y su profilaxis (On leprosy in Spain and its prophylaxis)*, described 50 patients, 32 men, and 18 women, but who noted that the health and curative plans for the residents did not match current requirements regarding treatment, due to scant resources or the general management's lack of independence. He also spoke of the construction of new buildings and the grounds being cultivated by the healthiest patients.¹¹ Another description of the development of the hospital is found in the doctoral thesis by Pérez Dagnino *Concepto moderno de la lepra y su estado actual en Alicante (The modern concept of leprosy and its current state in Alicante)*, published in 1915. During his visit to the hospital, he speaks of 79 patients treated with chaulmoogra oil, improvements in the installations, and the need to intensify the medical work, pointing out its religious and mystical aspect.¹² He

also visited the neighboring towns. At the beginning there was no medical manager, but there was a medical assistant director who lived in the neighboring town, citing, among others, the doctors Torrent, Mut, Espasa, and Pérez Plá, and subsequently Josep Darás, who had a medical assistant, Juan Fayos, and a nurse, Maria Fuyasol. In 1917, a specialist was employed as director, Mauro Guillén, a famous dermatologist from Valencia, who had to make a weekly visit, as well as Pedro Abal in the capacity of assistant manager. In the same year, the Government and some councils began to contribute very small quantities of money.¹³

A striking episode occurred in 1920, in relation to the “healer” Angel García, from the Canary Islands, who had contracted leprosy in Cuba. He used a chaulmoogra oil mixture as treatment, which was already in use, but to which he added various ingredients to improve digestive tolerance. He was authorized to use it and experimented on 80 patients, which led to some improvement. Subsequently, he did not return to the sanatorium and in 1922, when the patients found out the “curer” was in Valencia, a group of them escaped to visit him, alarming both the authorities and the population. Finally, the escapees returned to Fontilles, where difficulties arose regarding their admission.¹⁴

The medical work of the Fontilles Colony-Sanatorium began to grow, and on 22 January 1927 it was invested as the National Institute-School of Leprology, with Guillén being confirmed as medical director. Its healthcare program and prophylactic and scientific work was highly commended, and the work *Estudio científico de las modernas terapéuticas de la lepra* (*The scientific study of the modern treatment of leprosy*) by Abal and a work on pathological anatomy by Luis Bartual both received awards. In this way its work began to be known throughout the world. Dr. Sadi de Buen, Director General of Health, visited the center in the same year, although he had previously visited the doctors Murillo and Horcado, and inaugurated the statue of Father Ferris who had died in 1924 in Gandía and whose remains were transferred to Fontilles in 1930.¹⁵

José Sánchez Covisa, a leading figure in dermatology and representative for the socialist party in Cuenca, in his acceptance speech at the Royal Academy of Medicine on the social problem of leprosy in Spain, criticized the leprosariums, among them Fontilles, for its poor performance and lack of research resources; he also claimed that the School of Leprology was a lie and even spoke about patient abuse and excessive religious zeal, bordering on fanaticism. This led to a strong response from Mauro Guillén, who criticized the centralism of Madrid, in the light of leprosy being located in the peripheral areas of Spain, and listed the achievements of the Sanatorium, also pointing out the poor situation of the patients in the Hospital San Juan de Dios.¹⁶

The incorrect interpretation of the biblical texts and the ambiguous comparison of the word leprosy with sin, divine punishment, terror, contagion, deformity, plague, curse, opprobrium, stigma, mutilation, together with the lack of an effective treatment, forced the patients into hiding or to compulsory seclusion in the lazarettos, to a life of separation from society, being considered dead to the world and with religion as the only consolation. However, this type of religious devotion led to extreme paternalism and to regard the disease as sacred; for many years it had been said that the leprosariums “smelled more of incense than iodoform.” The total separation of the sexes is almost better left unexamined, given the extent of the prohibition which included no talking between men and women, the division into different areas for healthy and ill patients, and even physical separation in church and the ban on marriage between patients, in addition to the constant liturgy conducted in some leprosariums. However, what would have become of these ill people for centuries without the protection of the church, religious orders, devotees of saints, and other pious and charitable patrons who welcomed them given the passivity of the governments in solving this serious public health problem?

In 1931, with the arrival of the Republic and its anticlericalism, the Society of Jesus was expelled. Fontilles was seized by the state with ownership passing to the National Health Board by Decree on June 23, 1932, being renamed the National Sanatorium-Leprosarium. The newly appointed director was Pablo Montañes who had already visited Fontilles a year earlier to prepare a study. The residents had made complaints against the governing board, and a confidential report was sent to Marcelino Pascua, Director-General of Health, on the internal situation, and the Franciscan Religious Congregation were expelled.¹⁷ In this period important reforms were begun, the medical team was enlarged with various specialties and the laboratory improved. *Trabajos del Sanatorio Nacional de Fontilles* (*Studies on the Fontilles National Sanatorium*) was published which included several reports by the medical team created by Drs. Abal, Negro, and Aparisi. By then, 240 patients had been hospitalized, and despite treatment with chaulmoogra, these had increasingly advanced disease and were incurable, as seen in Figures 2 and 3. In 1933, Montañes was replaced by García Berasategui.¹⁸

In June 1936, the 2nd National Congress on Dermatology was held in Granada presided over by Gay Prieto, attended by 146 participants who presented 64 reports, including one by Montañes and Bejarano on “Epidemiology and the treatment of leprosy in Spain.”

Regarding the internal situation, conflicts increased together with the political and social tensions in the country and the despair of the patients who continued to have no hope of cure. This situation deteriorated yet more



Figure 2. patient at Fontilles, 1930.



Figure 3. A patient at Fontilles, 1950.

during the period of the Civil War, with many patients moving away and the internal situation becoming worse.

During the Civil War, the outlook for leprosy in Spain naturally deteriorated and at the end of the conflict there was an increase in cases caused by the displacement of the population, the lack of hygiene and food, and the arrival of troops from other countries, some from endemic areas. At the conclusion of the Civil War, the National Health Board returned Fontilles to the Board of Trustees in 1941 and its administration to the Society of Jesus, but healthcare continued under the control of the Health officer, with Manuel Such as director.

This association between the government and the Board of Trustees was uneasy and in 1942 the Board of Trustees took over again. The construction of the Trillo Sanatorium began in Guadalajara, in the grounds of an old spa resort founded in 1777 by Carlos III, and was inaugurated in 1943. We believe that its location in a nonendemic area, far from Madrid and with an adverse climate, was an error and that it should have been built in Jaén or Granada.

Regarding Fontilles, medical direction was provided by Fernández de la Portilla, Professor of Dermatology in Va-

lencia, who died the same year. In 1943, he was replaced by Contreras Dueñas and Javier Guillén, son of the first director, as Assistant Director. A new period began with an average of 300 patients in care, updated medical records, bacteriological control managed by the Pathological Anatomy and Necropsy unit, and the implementation of Ophthalmology, Otorhinolaryngology, Dentistry, and Internal Medicine units, as well as the foundation of the *Revista de Leprología "Fontilles"* ("Fontilles" *Journal of Leprology*) which was published every 6 months. Another important event was the setting up of courses on leprology for physicians in 1948 with a total of 37 attendees which included teachers of dermatology and directors of dermatological clinics. In 1951, another of its founders, Joaquín Ballester, died.¹⁹

Clinical Practice

During this new struggle, the sanatorium no longer remained a medieval charitable asylum with prophylaxis via isolation as its only tool, but represented a transitional

stage of treatment before the patients were returned to their social and family environment, and thus began outpatient treatment, early diagnosis and the examination of cohabitants.

Since February 1953, the year in which I joined the Sanatorium, I have witnessed the profound transformation of the Colony-Sanatorium into a modern hospital and health center with the threefold function of healthcare, research, and training. Regarding healthcare, the most important advances have been in clinical medicine, the successful treatment of extensive ulcers, and bacterial clearance among patients that has led to the change from indefinite hospitalization to temporary and outpatient treatment. The government awarded it the Cruz de la Orden Civil de Sanidad (Order of Merit for Health Medal).

Also in 1954, a plastic surgery unit was created to correct sequelae, especially facial ones, and in 1957 a physiotherapy and rehabilitation department was set up in the women's old nursing home that subsequently moved to the Santa Isabel unit. Similarly, a surgical unit was created for rehabilitation of paralysis and other neural lesions, with a team composed of Dr. Oliete and the resident doctors who worked there every week. A preventorium, the San Enrique School, was also set up in Alzira for the children of patients.

The unwarranted fear of the disease that had existed since the first years of the foundation meant there was strict separation in the sanatorium between areas where the healthy personnel and the patients lived, and between men and women. This situation slowly improved and finally disappeared.

The 6th International Congress of Leprology in Madrid in October 1953 represented an important event in the fight against leprosy in Spain, since it created great concern within Spanish dermatology, stimulated the work of early diagnosis in dermatological clinics and case finding, and promoted the creation of mobile teams in endemic areas.

This was also very important for Fontilles, since it became internationally known via the publication of 12 works. This was my first international congress, and I was subsequently visited by famous leprologists such as Dr. Wade, President of the International Society of Leprology, and the doctors Rodríguez de Filipinas, Lavalle, and Littan, among others.

The number of inpatients was maintained at around 300 and some patients were discharged following cure, although treatment was maintained for several years, with experiments using the new sulfones such as Diasone, Sulphetrone, and dapsona.

In 1959, I was awarded, by public examination, the position of director of the dermatological clinic of Dénia. I was in control of the leprosy patients receiving outpatient treatment, the mobile team of Alicante, and research on

cohabitants that involved Fontilles in far greater activity in monitoring outpatients and diagnosing new cases.

In 1960, the San Lázaro lazaretto in Can Masdeu in Barcelona was closed and its 20 patients transferred to Fontilles, and in 1964, the name "Colony-Sanatorium" was dropped and the sculpture of San Francisco de Borja made by the Valencian sculptor José Terencio Farré, my father, was inaugurated.

In 1964, I was appointed assistant director and in 1968 I became medical director of Fontilles, editor of the *Revista Médica* and director of courses in leprology. The Alzira preventorium closed in 1969, and in 1973, after participating in a congress on new drug combinations held at the Borstel Institute in Hamburg, we initiated multidrug therapy in Fontilles, that is, the simultaneous use of 2 or 3 drugs, such as clofazimine and rifampicin. This shortened treatment and prevented relapse and drug resistance, which led to faster cures with very few adverse reactions. This therapy was officially recommended by the World Health Organization (WHO) in 1982.²⁰ We would like to recall the immense task of the dermatological clinics which, between 1952 and 1970, diagnosed as many as 200 to 350 new cases per year, reaching a total of 5500 patients in Spain.²¹

Starting in 1970, the number of admissions at Fontilles began to drop below 300, falling to less than 200 in 1987, and by 1998 there were just 54 residents who had been completely cured, but who continued to live there due to their age and for social reasons. We also observed a decrease in the number of deaths, which was not due to any specific cause, but to the patients being cured, outpatient treatment, and the great drop in new cases in Spain (Tables 1 and 2). In 1997, we received the "Hospital of the Year" award.

Given the limited number of patients, most of whom were cured and living there for social reasons, the women were transferred to the Father Ferris men's wing, and after extensive refurbishment, the women's old wing became the Borja Geriatric Center with 90 beds, which was inaugurated in 1998.

Research

Research was always one of the goals of the hospital, with great efforts being made in experimenting with new drugs, the preparation of lepromins, the use of thalidomide (Spain was the second country in the world to begin using it), studies on humoral and cellular immunity, lepra reactions, clinical and histopathological studies of visceral lesions, the study of amyloidosis, immunotherapy and immunogenetics, the serology of phenolic glycolipids, and polymerase chain reaction studies in the diagnosis of initial cases. However, as Hansen bacillus has still not

Table 1. Number of Resident Patients and Deaths Between 1943 and 1990

Year	Residents			Deaths		
	Men	Women	Total	Men	Women	Total
1943	177	81	258	22		32
1944	155	97	252	17	7	24
1945	161	106	267	21	12	33
1946	159	106	265	15	10	25
1947	162	103	265	15	9	24
1948	171	111	282	14	12	26
1949	161	128	289	15	11	26
1950	169	132	301	15	15	30
1951	150	133	283	9	6	15
1952	166	128	294	8	5	13
1953	154	123	277	3	5	8
1954	148	135	283	8	5	13
1955	155	136	291	3	3	6
1956	156	133	289	6	7	13
1957	171	135	306	7	1	8
1958	176	134	310	2	7	9
1959	164	128	292	6	5	11
1960	182	110	292	2	4	6
1961	192	118	310	7	4	11
1962	189	110	299	12	4	16
1963	181	112	293	8	3	11
1964	187	116	303	7	5	12
1965	193	110	303	5	4	9
1966	184	105	289	8	5	13
1967	191	109	300	4	7	11
1968	175	112	287	9	8	17
1969	176	120	296	7	2	9
1970	170	110	280	10	7	17
1971	164	101	265	4	5	9
1972	168	108	276	6	2	8
1973	174	108	282	6	4	10
1974	174	107	281	6	2	8
1975	178	110	288	8	2	10
1976	185	112	297	2	4	6
1977	183	119	302	11	3	14
1978	163	119	282	11	4	15
1979	157	116	273	4	3	7
1980	163	117	280	5	2	7
1981	148	111	259	7	5	12
1982	144	107	251	6	4	10
1983	138	105	243	3	3	6
1984	139	100	239	7	2	9
1985	133	94	227	3	2	5
1986	120	88	208	8	2	10
1987	114	82	196	3	5	8
1988	111	74	185	3	5	8
1989	104	68	172	2	3	5
1990	98	65	163	5	1	6

Table 2. Number of Resident Patients and Deaths Between 1991 and 30 June 2008

Year	Resident Patients	Deaths
1991	164	3
1992	154	6
1993	143	
1994	128	10
1995	106	9
1996	108	5
1997	103	5
1998	87	6
1999	80	8
2000	71	2
2001	69	3
2002	68	3
2003	63	6
2004	63	4
2005	58	3
2006	60	4
2007	55	4
30 June 2008	54	2

been cultured 136 years after its discovery, no effective vaccine exists and more active drugs are needed to shorten treatment.²²⁻²⁶

The limited number of patients has prevented research continuing at this level, since research requires numerous patients with active disease, and ideally research centers should be founded in endemic countries. It is worth recalling numerous doctoral theses that we have supervised in the sanatorium. Important results have also been achieved in surgical treatment, bone lesions, neural lesions, motor paralyse of the feet and hands, and in the field of plastic and reconstructive surgery.

During my long stay I have had the opportunity to work with numerous resident doctors, some already gone, who I would like to recall and thank for their collaboration: Tarabini, Francisco Torrent, Antonio Ferrer, López Bravo, Elizabeth Herburger, Fernando Gatti, Paquita Ferrer, Berta Gervazoni, Roberto Ravioli, Vincent Mengual, María Quintana, Jaime Buigues, Jorge López Plá, J.R. Gómez, and Vincent Gimeno; and also the specialist doctors Aparisi, Chover, Marco Granell, Taberner, Joaquín Oliete, Vincent Buigues, etc.²⁶ We should also remember



Figure 4. Course in leprology, 1957.



Figure 5. Course in leprology, 1959.

the nurses, such as Fausto Melero, who had worked at Fontilles since before it was seized, Juan Sirera, Salvador Miralles, Garcia Hidalgo, etc.

Regarding health care, I want to praise the great work of the Franciscan sisters and the volunteer corps and the Jesuit fathers.

Training

The training of health workers has been a fundamental aim of the hospital. The first course in Leprology began in 1948, under the auspices of the National School of Health and the Madrid School of Professional Dermatologists, and directed by Dr. Contreras Dueñas. Initially it was run every 2 years and from 1955 it was held annually. The training activity intensified in 1958 when an agreement between Fontilles and the Order of Malta was signed to organize courses for missionaries and physicians; since then a total of 96 courses have been run, 45 for physicians, and 51 for health workers and missionaries. A course was set up for primary care physicians and another for nurses by the Government of Andalusia in 1971; similarly, 8 masters courses have been run in tropical medicine in Valencia (Figures 4, 5, and 6).

In the international field, and also sponsored by the Order of Malta, courses in leprology have been held in central America in San José de Costa Rica in 1993, 1995, and 1997 (Figure 7), and another in 1996 in Managua, Nicaragua. Seven dermatopathological meetings were held in 1976, 1977, 1979, 1980, 1982, 1983, and 1985 with the participation of the Dermatology and Pathological Anatomy units from the universities of Madrid, Barcelona, Cádiz, Alicante, and Valencia (Figure 8).

Many Spanish teachers have collaborated in the courses, such as Gay Prieto, Vilanova, Contreras Dueñas, Gómez Orbaneja, Dulanto, Piñol, Azúa, Mascaró, Cabré, Castells, Calap, García Pérez, Ferrándiz, Con-



Figure 6. Course in leprology, 1979.



Figure 7. 2nd International Course in leprology, Costa Rica, 1995.

treras Rubio, Cuevas and several non-Spanish teachers, such as Browne, Hastings, Gilbert, Carlos Gatti, Fernando Gatti, and Lechat.



Figure 8. Fontilles. Dermatopathological meeting, 1977



Figure 9. Visit to Fontilles by Queen Fabiola and Princess Elena, 1992.



Figure 10. Examination of cohabitants in Nicaragua (San Francisco Libre), 1992.

Fontilles has performed excellent work in this important aspect of education, with some 2600 professionals having participated in these courses, some of who returned to the courses as teachers, and to work not only in Spain but in

many of the endemic countries in Asia, Africa and Latin America.

The *Revista Médica* became a quarterly journal in 1968 and has published more than 1000 articles based on work conducted in the sanatorium and by external collaborators, and more than 11 000 summaries of articles from other journals. Another educational aspect was the book *Lessons in Leprology* published by Fontilles press in 1963, edited by former patients, and which covers all the lectures that had been given during the courses. In 1973, we wrote the not-for-profit book *Lecciones de leprología (Lessons in Leprology)*, (484 pages and 215 illustrations) sponsored by Fontilles and published by Domenech publishers, which was directed at dermatologists, Tropical Medicine physicians and collaborators. In 1999, the Valencian Autonomous Government, in commemoration of 50 years since the Declaration of Human Rights, published my book *Lepra. Pasado, presente y futuro (Leprosy. Past, Present, and Future)*²⁷ followed by a chapter on leprosy in several books on dermatology. The Ibero-Latin-American College of Dermatology (CILAD) recently published my atlas of leprology with nearly 400 illustrations that was distributed in the recent congress held by CILAD in Quito, Ecuador, in 2008.

International Collaboration

The fight against leprosy respects no borders; hence, Fontilles moved onto the international stage by becoming a member of the ILEP (International Federation of Antileprosy Associations) in 1969, together with another 15 members from European, American, and Asian countries. It is represented at the biannual coordination meetings in June and December in various countries and is part of the Medical Commission of the ILEP. In the early years, Fontilles was the only active member that treated its own patients, since the remaining members devoted the funds raised to different projects in endemic countries, whereas our aim was to obtain financial help for our hospital in the form of technology, building restoration, financing research programs, publications, etc.

The associations that have provided the most help are the Amici de Raul Follereau de Bolonia, Italy, the German Association of Würzburg, Emaus Suisse, Friends of Cardinal Legar in Canada, and the Damian de Bélgica foundation, which was our strongest supporter, to the extent of the name “Damian-Fontilles” being associated with us. To this end, a meeting was held in Fontilles in the presence of Queen Fabiola and Princess Elena, led by Dr. Schenkelaars, who was President of the association, but the attempted merger did not occur (Figure 9).

From 1982 onward, Fontilles began collaborating in international projects, some with the ILEP as well



Figure 11. International Federation of Antileprosy Associations (ILEP). 30th Anniversary, London, 1996. Presidency, Diana of Wales.

as others run independently in India (Nalgonda, Sumanahalli, Harapanahalli) with the Franciscan sisters who had worked in Fontilles. In 1992, the Leger Cardinal Association of Montreal, Canada, which had set up a project in Nicaragua, asked me to visit the country and monitor the endemic foci in Managua, San Francisco Libre, and Chinandega where numerous cases of child leprosy had been discovered among cohabitants (Figure 10).

Subsequently, Fontilles set up new projects in Brazil, Equatorial Guinea, and recently in India (Surat, Bawnagarh, Junagadh), Nepal, China, etc. Fontilles has another very good relationship with the Order of Malta and its permanent International Committee in Geneva (CIOMAL), which is a member of the ILEP. It had already organized a congress in Rome in 1956 for the social rehabilitation of leprosy patients and their families, promoted interest in leprosy, and contributed to the foundation of the ILEP (Figure 11). Apart from supporting the courses, it awarded the Cruz del Mérito Melitense to Antonio Guillem Marti who, as President of the Governing Board of Fontilles, had performed a magnificent task and shown great kindness to the patients over the years and also to myself.

Fontilles has organized several ILEP meetings in Spain, the first in Fontilles in 1970, the second in Alicante in 1992, and the third in Valencia in 2005. In 1998, a meeting was held in Fontilles with the Integration, Dignity, and Economic Advancement association.

Congresses

In 1923, the 3rd International Conference took place in Strasburg, where Mauro Guillén, the first director



Figure 12. 8th International Congress of Leprosy, Rio de Janeiro, 1963.



Figure 13. 12th International Congress of Leprosy, New Delhi, 1984.

of Fontilles, contributed a paper on “The Diagnosis of Leprosy.” In 1924, the 2nd Congress of Medical Sciences took place in Seville where the paper “The Treatment of Leprosy” was presented. Subsequently, Fontilles has been represented at all the international congresses on leprology, except that held in Cairo in 1938 due to the Civil War: Havana in 1948, Madrid in 1953, Tokyo in 1957, Río de Janeiro in 1963 (Figure 12), London in 1968, Bergen, Norway, in 1973, which commemorated the centennial of the discovery of *Mycobacterium leprae* by Hansen, Mexico in 1978, New Delhi in 1984 (Figure 13), The Hague in



Figure 14. 3rd Congress of Hansenology of Endemic Countries, Alicante, 1990

1988, Orlando in 1993, Beijing in 1997, San Salvador de Bahía, Brazil, in 2002, and Hyderabad, India, in 2008. Our lecture at the 11th congress was entitled “The History of Leprosy in Spain.” We have also participated in numerous Ibero-Latin-American dermatology congresses, the most recent in October in Quito, Ecuador, coordinating the symposium “Leprosy today,” as well as those held in Spain and Europe with presentations and posters on leprosy, without forgetting the 3 symposia on leprosy in Europe organized by Amici de Raul Follereau in Santa Margarita de Ligure, Italy.

Another important event was the 3rd Congress of Hansenology in Endemic Countries held in Alicante in 1990, bringing together some 200 leprologists from around the world with the presentation of over 100 papers, and that was followed by a visit to Fontilles (Figure 14). In November 1999, we attended a congress on leprosy and the Buruli ulcer that was held in Abidjan, Ivory Coast, and sponsored by WHO. We visited Adzope Hospital, which is a member of the Follereau Association for leprosy, and Buruli ulcer patients. The latter disease is a very frequent mycobacteriosis in West African countries. Our visit led to the monograph *Leprosy and Buruli Ulcer* being published in 2000. This was the first work on this disease published in Spain.

Socioeconomically, a very important event took place in 1977, when we reached an agreement with the Spanish National Health Service and, as in other hospitals, we began to receive support on a per patient, bed, and day basis, given that nearly all our patients were entitled to this. Both Antonio Guillem, President of the Governing Board, and Father Berra, administrative director, were not especially in favor of this because they recalled that in 1931 there had been problems and interventions by the government

regarding financial support, the return of the sanatorium to the Board of Trustees, and that their coexistence with the National Health Board had been uneasy. Nevertheless, we managed to convince them and went to Madrid where I signed the agreement with Dr. Martínez Estrada at the National Welfare Institute. The agreement was made even stronger under the new director Dr. Francisco Zaragoza, and I remain completely convinced that this was a major economic achievement.

Since 1953, the number of visits by leprologists and dermatologists from Spain and other countries has been countless, above all those invited to participate in the courses and dermatopathological meetings. The number of visits by civil and religious authorities has also been immense, such as those by the Apostolic Nuncio Monsignor Innocent, the archbishops of Valencia, the Head Fathers of the Society of Jesus, Arrupe and Kolvenbach, Raul Follereau, the presidents of the ILEP, Carmen Polo de Franco, Queen Fabiola, Princess Elena, etc.

Conclusions

During the last 8 years, as in the novel by Jordi Sebastián *Los que se quedan* (*Those who stay*), I have stayed and continued my work in Spain and in the international field of leprosy as adviser to the International Society of Leprology and as a WHO expert. I was able to assess the leprosy situation by attending the “Leprosy in Asia” congress in Agra, India, in 2000, the RADLA Mar del Plata congress, Argentina, in 2000, the International Congress of Leprosy in Bahía in 2002, the “Leprosy in Africa” congress in Johannesburg, South Africa, in 2005, the CILAD Symposium on Leprosy in 2005 in Cartagena de Indias, the Symposium on leprosy in the Dominican Republic in 2006, the “Infectious and Tropical Dermatoses” congress in Manaus, Brazil, in 2006, the World Leprology Congress in Hyderabad, India, and the CILAD of Quito, also in 2006, as coordinator of the Symposium on Leprosy and of several courses in leprology in Spain.

I have noted that, despite the success of multidrug therapy at reducing the prevalence and incidence of the disease, new cases continue to occur and currently there are 1 million people disabled by the disease. Above all, and unfortunately, stigmatization, marginalization, and social rejection are still a reality for those affected by this disease. This is a manifestation of collective prejudice and cruelty against a group of human beings whose only crime is to suffer from a disease. In June 2009, the United Nations Human Rights Council will issue a statement prohibiting discrimination against leprosy patients and their family members.

It is unquestionable that a huge step has been taken in the fight against leprosy and that it stopped being a public health problem in Spain a long time ago, as shown

by the fact that in recent years, of the 12 to 15 new cases per year, 10 involve immigrants. In 2007, of the 14 new cases diagnosed, 10 were patients from Africa and Latin America, and this will remain the case in the coming years. However, leprosy will never again be an emerging disease in Spain, and Fontilles has without any doubt played a key role in its elimination.

At the world level, there has been a clear decrease in prevalence and, more importantly, in the last 7 years the number of new cases per year has dropped from 700 000 to 254 525 patients in 2008. Since 1984, 14 million patients have been cured and the number of endemic countries has dropped from 122 to 9, with 80% of all patients from India and Brazil.

In 2009, Fontilles celebrated its first 100 years, and I have been intensely involved for 50 of those. This centenary coincided with the centenary of the Spanish Academy of Dermatology and that of the 2nd International Leprosy Conference held in Bergen where Hansen was president. During this centenary, we must recall the founders, Father Ferris and Joaquín Ballester, as well as all those who have worked in this institution, such as the health staff, clergy, governing boards, volunteers, benefactors, employees, but especially the patients who are the protagonists of this great work, the pride of Spain and glory of Valencia. Fontilles will continue the fight against this disease that is a testament to the pain, sadness, and poverty, suffered by humankind since the distribution of leprosy follows patterns of poverty, famine, underdevelopment, and social inequality. We will win the final battle and achieve the total physical and mental wellbeing and social and occupational welfare of our fellow humans to whom society as a whole and each of us as individuals owes a longstanding debt: to achieve a world free of leprosy.

Conflicts of Interest

The author declares no conflict of interest.

References

1. Terencio de las Aguas J. Historia de la lepra. *Rev Lepr Fontilles*. 1999;22:27-70.
2. Peset Vidal J. La lepra en la provincia de Valencia. 1877.
3. Codina Zapico O. La lepra en la provincia de Alicante. *La Fraternidad Médico-Farmacéutica*. 1888;31:1-3.
4. De la Vega J. La enfermedad en la obra de Gabriel Miró. *Guadalhorce, Alicante*; 1974;12.
5. Calatayud S. Observaciones practicas sobre la lepra. *Ayuntamiento de Pedreguer*. 1879;38-45.
6. Terencio de las Aguas J. La lepra en el Reyno de Valencia. Siglo XIX. *Rev Lepr Fontilles*. 1978; 11,347-50.
7. Solanes PP. Les Amó hasta el Fin. *Junta de gobierno Fontilles. Tarragona*. 1945;158-61.
8. Caridad Heroica. *Colonia Sanatorio San Francisco de Borja para pobres leprosos. Tipogragia Moderna. Valencia*. 1904;119.
9. González Castellanos J. Prácticas para la extinción de la lepra en España. *Asociación Española para el Progreso de las Ciencias. Congreso de Valencia. May, 1910*.
10. Terencio de las Aguas J. Bergen Cuna de la Leprología. *Rev Lepr Fontilles*. 1992; XVIII:555-64.
11. Bover Albi R. De la lepra y su profilaxis en España. *Madrid: Sucesores Rivadeneyra*; 1913.p.21-4.
12. Pérez Dagnino A. Concepto moderno y su estado actual en la provincia de Alicante. *Tesis doctoral. Alicante*. 1915;120-36.
13. Terencio de las Aguas J. Historia del Sanatorio de Fontilles. *Piel*. 1992;7:115-25.
14. Terencio de las Aguas J. Labor de Fontilles en la lucha contra la lepra. *Rev Lepr Fontilles*. 1955;3:578-92.
15. San Pelayo y Sadi de Buen. La lepra y el problema de la lepra en España. *Madrid: Espasa Calpe*; 1923.p.19-24.
16. Guillen M. El problema social de la lepra en España. *Ecoss Españoles. Dermatología y Sifiliografía. Madrid*. 1928;3-15.
17. Bernabeu J, Ballester T. Lepra y Societat en la primera meitat del segle XX: La Colonia Sanatorio de Fontilles (1908-1932) i la segua incautació per la Segona Republica. *Aguaites. Tardon*; 1991:49-86.
18. Montañés P. Trabajos del Sanatorio Nacional de Fontilles. *Alicante: Suc de Such*. 1934.p.2-13.
19. Contreras F, Miquel R. Historia de la lepra en España. *Madrid: Grav Hergon*; 1973.p.139-43.
20. Terencio de las Aguas J. Lecciones de leprología. *Valencia: Edit. Domenech*; 1973.p.67.
21. Terencio de las Aguas J. Historia de la lepra en España. *Piel*. 2005;20:485-97.
22. Terencio de las Aguas J. Tratamiento de la lepra con Lampren. *Rev Lepr Fontilles*. 1970;7:443-50.
23. Terencio de las Aguas J, Richeri D. Tratamiento de la lepra con rifampicina. *Rev Lepr Fontilles*. 1974;9:365-73.
24. Terencio de las Aguas J. Tratamiento de la lepra con rifampicina e Isoprodian. *Rev Pre Fontilles*. 1975;10:163-8.
25. Terencio de las Aguas J. Tratamiento de la lepra. Nuevos esquemas. *Rev Lepr Fontilles*. 1998;XXI:689-98.
26. Terencio de las Aguas J. Terapéutica de la lepra. *Rev Dermatología y Cosmética*. 2001;117-24.
27. Terencio de las Aguas J. Lepra. Pasado, presente y futuro. *Valencia: Generalitat Valenciana*; 1999.