



SPANISH FLU AND THE “BRILLIANT WORK” OF DRS REVOREDO, MEIRA AND MONTEIRO OF THE SÃO PAULO ACADEMY OF MEDICINE

A GRIPE ESPANHOLA E O “BRILHANTE TRABALHO” DOS DOUTORES REVOREDO, MEIRA E MONTEIRO DA ACADEMIA PAULISTA DE MEDICINA

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ABSTRACT: The foundation of the São Paulo Academy of Medicine (Academia Paulista de Medicina - APM) coincided with the period when the deadly Spanish flu began to spread around the planet. During the epidemic in the city of São Paulo, members of the APM were among the doctors who acted in an attempt to minimize the spread of the disease and the multiplication of the fatal cases of this illness. When the number of victims of the flu fell in the city, Drs Galeno de Revoredo, Rubião Meira and Eduardo Monteiro drafted a report, presented at an APM session, with recommendations to combat the epidemic flu in the interior of the state. Based on assumptions of social history, this article discusses aspects of this report through its contextualization with debates on the disease and the treatment of victims of the flu in the city of São Paulo.

KEY-WORDS: Spanish flu, Epidemic, Diagnosis; Therapy.

RESUMO: A fundação da Academia Paulista de Medicina (APM) coincidiu com o período que a virulenta gripe espanhola começou a se difundir pelo planeta. Durante a epidemia na cidade de São Paulo, membros da APM estavam entre os médicos que atuaram para tentar minimizar a difusão da doença e a multiplicação dos casos fatais da moléstia. Quando o número de gripados diminuiu na localidade, os doutores Galeno de Revoredo, Rubião Meira e Eduardo Monteiro redigiram um relatório, apresentado em sessão da APM, com recomendações para o combate à gripe epidêmica no interior do estado. Este artigo discute, a partir de pressupostos da história social, aspectos desse relatório contextualizando-o com debates sobre a doença e o tratamento dos gripados na cidade de São Paulo.

PALAVRAS-CHAVE: Gripe Espanhola, Epidemia, Diagnóstico, Terapêutica.

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INTRODUCTION

In the city of São Paulo, the month of August 1918 was marked by homages to doctors from São Paulo State who, along with colleagues from other parts of the country, formed the special military mission sent to France for the “purpose of aiding the health service of our allies, [maintaining] a temporary hospital in the war zone for as long as the war should last” (BRASIL, 1918).¹

Brazil had entered the Great War in the previous year on the side of France, the United Kingdom, Russia and their allies, and the so-called Brazilian Medical Mission was among the country’s initiatives in the conflict. The Mission was the headline of articles in São Paulo’s newspapers from the outset, following its creation by federal decree in July 1918, and notes were published on banquets and other festive gatherings that took place around the country to pay homage to the Mission before its departure on the 18th of August (BRUM, 2014).² At the ceremony organized by the São Paulo Faculty of Medicine and Surgery, verses specially written to salute the natives of São Paulo in the group³ were read aloud, in praise of medicine and doctors:



Blessed be the hand that the sower
Of charity sprinkles on the land,
That brings the light of hope to the brink
From the beds, where Death already rests! ...
(...)
Let the same star that leads you to war
Glorious, bring you back pushing the figure
“Of the golden green tassel of our Earth!”
(MISSÃO, 1918, p. 74-75).

It was at this time, that, on the 14th of August, *O Combate* newspaper published an article on the São Paulo Academy of Medicine (Academia Paulista de Medicina - APM); which would be established on that day (ESTÁ FUNDADA, 1918; ACADEMIA, 1919).

¹ As determined by Decree 13.092, Art. 6: “All personnel, if they do not already have the corresponding posts in the Army or in the Navy, will be commissioned to serve and awarded due honors and financial reward while they remain in the service; consequently, everything is subject to the rules of military discipline (BRASIL, 1918).

² The Brazilian Medical Mission comprised 112 members: doctors, pharmacists and military personnel (BRUM, 2014).

³ The members of the Brazilian Medical Mission from São Paulo were doctors: Lieutenant Colonels Benedicto Montenegro (leader of the group from São Paulo) and Baeta Neves; Captains Christiano de Souza, Raphael Penteadó de Barros and Adolpho Corrêa Dias Filho; and Lieutenant Raul Vieira de Carvalho. The group was accompanied by attachés: Dr João Monlevade and Dr Arsênio Galvão Filho (MISSÃO, 1918, p.74)

The unsigned newspaper article stated that the institution, like its European and North American counterparts, would focus particularly on “medical and social issues, as well as issues of interest to doctors” (ESTÁ FUNDADA, 1918).

The first meetings of the new association were held in September, the same time that the newspapers of São Paulo City began to publish news, which first came from Spain, of a new and deadly epidemic of the disease that had been given the name Spanish flu⁴ (BERTUCCI, 2004). Within a few days, articles were telling of the growing number of victims in several European countries, with cases of the disease also being identified in Africa. At this time, several members of the Brazilian Medical Mission and soldiers in the Brazilian army, whose ships had docked in Dakar (Senegal), were taken sick, and some died (BRUM, 2014).

In late September, while the Brazilian government was preparing to send human reinforcements and medicine to help the Brazilians afflicted with what they called the “terrible sickness” (A INFLUENZA, 1918b), the newspapers were publishing articles speculating on the future of the mission.⁵ Medical discussions of the disease began, including at the São Paulo Academy of Medicine.

At the session on the 25th of September, the question put to the academics was: What is the “true morbid entity that, under the name of Spanish flu has taken the precious lives of our poor and selfless colleagues who left for Europe to undertake the double duty of doctors and patriots”? (SESSÃO, 1918c, p. 34) For the doctors gathered at the APM, owing to the lack of detailed clinical descriptions, it was difficult to believe that a flu could kill so quickly, and the debates also sought to identify possible causes of dengue fever and pappataci (or three-day) fever (SESSÃO, 1918c, p. 34-36).

On the day after the meeting, the publication in newspapers a telegram sent by Dr Colonel José Thomaz Nabuco de Gouvêa, head of the Brazilian Medical Mission, informed the federal government that the disease that the Brazilians had suffered in Africa was a flu, which was spreading and causing deaths in the region (BERTUCCI, 2004). For most Brazilian doctors, Nabuco de Gouvêa’s telegram put an end to the debates on the nature of the disease.

⁴ In 1918, the first, not serious, wave of the flu occurred in the first semester and Spain, a neutral country in the Great War, without “war censorship” published news of the disease, which had international repercussions. The flu came to be known as Spanish flu (this is the main hypothesis for the name of the 1918-1919 flu). The name Spanish flu continued to be used when, after a combination of this flu with an animal flu, a new and devastating wave swept almost the whole world from August 1918 to January 1919. There was a third, not very serious, wave from February to May 1919. Cf. Echeverri Dávila (1993).

⁵ Brazilian Medical Mission continued their voyage to France. Cf. Brum (2014)

In mid-September, while the discussions were taking place at the APM and the telegram from Africa was made public, the ship Demerara put into port at some cities along the Brazilian course. The ship, which had come from Liverpool, had made a stop at Lisbon before docking at Recife, Salvador and Rio de Janeiro.

In the then capital of Brazil, suspected cases of the Spanish flu led to the ship being disinfected and an evaluation of the passengers' health, as several people had left the ship in Rio de Janeiro, showing no symptoms of a disease. Similar measures were taken on other ships that arrived in Brazil at the same time (SEIDL, 1920). Even so, news of the large number of flu victims in the port cities where the Demerara had docked began to circulate around the country.

At the same time, medical information was published that suggested a possible difference between the flu in Brazil, which would be the flu "of all time", and the Spanish flu that raged beyond the sea (A GRIPPE, 1918a; GRIPPE, 1918). However, the number of victims in Brazil grew and the frightening symptoms of the flu were evident. It was indeed the Spanish flu. The situation in Rio de Janeiro exemplified how quickly the disease spread. On the 8th of October, some cases of the flu were confirmed. Two days later there were 440 cases, and on the 14th of October there were twenty thousand (BRITO, 1997). The number of cities on the coast and in the interior of Brazil that reported the multiplication of cases of the Spanish flu grew with extraordinary speed (ABRÃO, 1998; ABREU JUNIOR, 2019; BERTUCCI, 2004; GOULART, 2003; SILVERIA, 2008; SOUZA, 2009).

From September to December 1918, when the Spanish flu had spread practically all over Brazil, the São Paulo Academy of Medicine held six ordinary sessions and one extraordinary session (ACADEMIA, 1919). Among the members were doctors who were combatting the Spanish flu in the city of São Paulo, such as Dr Arthur Neiva, director of the State Sanitation Service of São Paulo (Sanitation Service), and Dr Arnaldo Vieira de Carvalho, coordinator of the Provisional Hospitals.

Held in late November, the agenda of the extraordinary session included a discussion of the report entitled "Diagnosis, prognosis and treatment of the flu", drafted by Drs Galeno de Revoredo, Rubião Meira and Eduardo Monteiro, to aid treatment of the epidemic, cases of which continued to rise in the interior of the state. Based on assumptions of social history, this article discusses aspects of this report, contextualizing it with debates on the disease (published even in newspapers of the capital of São Paulo

State) and considering the (palliative) medicines recommended for flu victims and the organization of help for the sick in the city of São Paulo.

THE SPANISH FLU IN SÃO PAULO

Beginning in early October, the newspapers in the capital of São Paulo State published alarming news on the Spanish flu in Brazil and how government, state and municipal authorities were discussing what to do to contain the spread of this disease. As the doctors affirmed, the flu, whether an epidemic or not, was a microbial and endemic disease that was spreading around the world, and there was no specific way to combat it (BERTUCCI, 2014).

On the 14th of October, the Sanitation Service held a meeting to prepare a communiqué on the disease to the population. However, its publication was hampered the following day by the official confirmation of the first case of the Spanish flu in the state capital, a young man who had been admitted to Hospital de Isolamento on the 13th of October (BERTOLLI FILHO, 2003; BERTUCCI, 2004).

The “Communiqué of the State Sanitation Service”, published in the São Paulo press on the 16th of October, attempted to placate people. It informed the people that the disease known as Spanish flu was a kind of influenza that everyone was familiar with, for which “there was no effective local or regional prophylaxis”. The text stated that individual prophylaxis was the way to combat the disease: personal hygiene, paying special attention to the nose and throat (recommending inhalation and gargling). The communiqué warned people to avoid gatherings and crowds, chills and contact with flu victims. It mentioned the ingestion of certain substances, especially quinine⁶, to help prevent and fight the disease, and recommended rest for those who fell victim to it (A INFLUENZA, 1918a, p. 5).

The contents of the communiqué were summarized and, under the title of “Advice for the People”, published daily in *O Estado de S. Paulo* and other newspapers. The effect was not what many people had hoped for because the daily total of flu victims grew greatly in the capital. There were 29 patients on the 16th of October, another 57 on the next day and 179 on the 18th of October. In other words, officially, there was one victim in the city on the 15th of October and on the 18th there were 266 people with Spanish flu

⁶ Quinine, a white alkaline substance, is extracted from quina (*cinchona officinalis*) and combined with acids for better use, resulting in quinine salts. The most commonly used acid is sulfuric acid, resulting in quinine sulphate. The use of quinine salts (or quinine) to treat Spanish flu was discussed around the world during the epidemic and following years. Cf. Reviews (1922); Prophylactic (1924).

(MEYER; TEIXEIRA, 1920). On the 21st of October, the residents of São Paulo began to count the number of people who died from the disease.

Despite the generalized fear (BERTUCCI, 2009), the mobilization of the city's residents to care for the sick increased in keeping with the number of victims and fatal victims of the epidemic in the city, which had a population of approximately 528,000 at the time.

Since the first confirmed cases of Spanish flu, in addition to action taken by the government, doctors, professors and students at the São Paulo Faculty of Medicine and Surgery, pharmacists, and the São Paulo branch of the Brazilian Red Cross, a great deal of help was provided by the population of the city: individual assistance to flu sufferers and their families (provided by churches, religious orders, freemasons, spiritualists and anonymous groups in São Paulo); initiatives to collect and distribute food; the lending of places to care for the sick (provided by football clubs, companies, associations and leagues); and donations, in cash and in kind, to the entities that organized help for flu victims under the determinations of the Sanitation Service: the Red Cross, São Paulo Metropolitan Curia and Nationalist League⁷ (BERTUCCI, 2004).

In this scenario, starting on the 18th of October, the Sanitation Service, under the direction of Dr Arthur Neiva, began to place restrictions on public places, and these restrictions were tightened within a few days. Literary, sport and recreational clubs were forced to postpone their meetings and games. Museums and parks were closed, and schools, followed by universities, cancelled their classes. The São João School, in downtown São Paulo, along with other buildings in the city, were turned into Relief Stations, where medical services were provided and medicine and even food was distributed. The Immigrants' Hostel was made into a ward to serve the neediest. The Red Cross allowed its headquarters to be used to treat flu victims and pharmacies were authorized to fill prescriptions for the poorest people free of charge, the bill was paid later by the government (BERTUCCI, 2004). In these cases, the doctors' prescriptions were written "in [special] stamped and numbered books" provided by the Sanitation Service. After the epidemic, 83 pharmacies presented the bill for 8,833 prescriptions filled for residents of the city of São Paulo (SÃO PAULO, 1919, p. 117-119).

However, the number of people with the Spanish flu grew, and medication and food began to be in short supply (producers, retailers and transporters also fell sick), prices

⁷ The Nationalist League, a non-partisan organization, which fought for the secret vote and education, was created in São Paulo in 1917 and ceased its operations in 1924.

soared⁸ and people began to criticize the medical and governmental measures that were taken.

On the 1st of November, amidst the growing criticism, Provisional Hospitals were set up by the Sanitation Service to concentrate on treating the flu victims, as doctors were taking sick, as were other people involved in treating patients. These hospitals, a strategy of the Sanitation Service to contain the chaos that seemed inevitable, were the responsibility of Dr Arnaldo Vieira de Carvalho, director of the São Paulo Faculty of Medicine and Surgery (A EPIDEMIA, 1918, p. 5).

However, on the 8th of November, when 6,703 new cases of the Spanish flu were recorded in São Paulo and 258 people died of it (MEYER; TEIXEIRA, 1920), the State Secretary for the Interior, pressured by questions regarding the structure to combat the epidemic (and perhaps by signs that Arthur Neiva was growing sick (GOVERNO, 1918)) met with representatives of groups that were providing help for victims and the director of the Sanitation Service to discuss the actions taken against the epidemic (MEYER; TEIXEIRA, 1920).

The outcome of the meeting was a structural reorganization, with the clustering of similar activities that had hitherto been conducted individually, under the responsibility of coordinators. In general terms, three men took direct command of the services to combat the Spanish flu: the president of the Nationalist League, Frederico Vergueiro Steidel, was in charge of the Relief Stations (except those organized by the Red Cross); Dom Duarte Leopoldo e Silva, of the Metropolitan Curia, coordinated domestic aid for flu victims and their families; and Dr Arnaldo Vieira de Carvalho remained in charge of the Provisional Hospitals. The Sanitation Service was responsible for the supervision (MEYER; TEIXEIRA, 1920).

In this context, a statement from Arthur Neiva, published in *A Platéia* newspaper on the same day as this meeting, could not have attracted much attention from the citizens of São Paulo (NOTÍCIAS, 1918).

Despite the skepticism and the fact that a number of weeks would elapse before the end of the epidemic, Neiva was right: the number of new cases of the flu was falling. In a few days, it also became clear that the number of deaths resulting from the disease was

⁸ Since the previous year, foodstuff had already risen in price because in addition to production problems, Brazil's participation in the war led to increased food exports to the allies. In an attempt to mitigate the problem, in mid-June 1918, the federal government created the Public Food Commissariat. However, it was short lived.

falling. The Spanish flu epidemic was repeating the same pattern as other flu epidemics in terms of its duration in a region, which was six weeks.⁹

REVOREDO, MEIRA AND MONTEIRO'S "DIAGNOSIS, PROGNOSIS AND TREATMENT OF THE FLU"

It was in this scenario that the São Paulo Academy of Medicine resumed its activities on the 25th of November 1918. The session, attended by twelve doctors and "numerous students of medicine", was short. Dr Rubião Meira, president of the APM, made a speech that recalled the actions of doctors, pharmacists and medical academics, the residents of São Paulo and government authorities to aid the victims of the flu in the state capital. Meira then declared his "eternal gratitude" to those colleagues who had caught the Spanish flu while treating victims of the epidemic and who had died of the disease, namely Theodoro Bayma, Eduardo Martinelli, Ayrosa Galvão, Diaulas de Souza e Silva, André Maurano, Luiz Maffei, Etheocles de Alcântara Gomes, Sylvio Porchat Bellegarde, Laffayette Moreira, Brenha Ribeiro and Joaquim Nunes Cintra (SESSÃO, 1918b, p. 40-41).

Before the meeting was adjourned, Dr Galeno de Revoredo asked to take the floor and proposed that, based on the knowledge gained by the members of the São Paulo Academy of Medicine during the epidemic, a report should be written regarding the best therapy to combat the Spanish flu (SESSÃO, 1918b). The doctor's proposal was certainly in keeping with the APM members' interest in medical and social themes (ESTÁ FUNDADA, 1918).

According to Dr Revoredo, this report could be used by doctors in the interior of São Paulo State who were still combating the epidemic. Rubião Meira then proposed that, in addition to treatment, considerations regarding the diagnosis and prognosis of the disease and its complications should be listed. These proposals were approved (SESSÃO, 1918b). As well as Galeno de Revoredo and Rubião Meira, Dr Eduardo Monteiro was appointed to the committee. Monteiro participated in the debate at the APM on the nature of the epidemic when the Brazilian victims were taken ill in Africa.

On the 30th of November, the three doctors presented their colleagues with the results of the committee's work. Their report, entitled "Diagnosis, prognosis and treatment of the flu" was met with unanimous approval and hailed as a "brilliant work" by Dr

⁹ In October, the "Communiqué of the State Sanitation Service" stated that "It is quite possible that the duration of the epidemic among us will reach its peak in six weeks" (A INFLUENZA, 1918a).

Deolindo Galvão, who highlighted how useful it would be as a “script for professionals in the treatment of the epidemic that has ravaged through our state” (SESSÃO, 1918a, p.42).

In their report, Revoredo, Meira and Monteiro divided the manifestations of the flu epidemic (they did not refer to it as “Spanish”) into two categories: the more frequent “mild form” and the multiple and mostly fatal “complicated forms”. The former, as in any manifestation of a flu, lasted an average of 5 or 6 days, and its main symptoms, in addition to a high temperature (generally 39.5°) and pulse in relation to the temperature, were “[...] nasal catarrh, tracheobronchial, inappetence, prostration, white tongue, slightly bluish [mucosa?], glittering eyes, headaches and body aches, malaise, and dark urine” (REVOREDO; MEIRA; MONTEIRO, 1918, p. 1). If the victim had a previous illness like tuberculosis, diabetes or nephritis, the case should always be listed as “complicated”.

The three doctors recommended close observation of flu victims: pulse and temperature (to predict the possibility of a heart attack), the daily quantity of urine (a reduced volume could precede uremia) and general weakness of the organism. Daily examinations of the lungs were essential. According to Revoredo, Meira and Monteiro, except in cases of irregularity in medical care and a little carelessness on the part of the patient, this form of the flu did not involve major risks. However, they warned that despite the favorable prognosis, there were not a few cases of patients treated by “conscientious and competent doctors” who soon after being discharged returned to their doctors with a 40° fever and “serious pulmonary congestion” (REVOREDO; MEIRA; MONTEIRO, 1918, p. 1-3).

The “complicated forms” of the flu, with a prognosis of considerable risk of death included influenza with pneumonia and toxemia.¹⁰ The form with pneumonia, with a duration of 7 days, was identified by the general malaise of the victim, with a fever, red cheeks, cough with red or plum-colored sputum and severe prostration. In the form with toxemia, “which frequently kills the patient through cardiac collapse”, the pulse and temperature were out of step and the victim showed severe prostration, a complete lack of appetite, great difficulty breathing, small urine emissions, with a considerable amount of albumin and cylindroids (which could be the result of inflammatory processes). Victims of the form with toxemia also showed signs of subdelirium and agitation, slight congestion of the lungs, enlarged liver and bluish mucous membranes and skin (REVOREDO; MEIRA; MONTEIRO, 1918, p. 2-3).

¹⁰ The other most frequent “complicated forms” involved pulmonary congestion, bronchopneumonia, pleural congestion and gastrointestinal flu.

The words regarding these “complicated forms” appeared to echo reports from doctors who, at the end of the first half of 1918, witnessed deaths in the military training camps in the interior of the United States; the region where the deadly outbreak of the Spanish flu began, which then spread around the world through the movement of troops (ECHEVERRI DÁVILA, 1993). A doctor from Camp Dodge, Iowa, stated that “the devastation of the disease was revealed by blush cheeks, difficulty breathing and such sudden and numerous deaths” (EDGERLY; MANSON; CARR, 1919, p. 212).

In the report that they presented to the São Paulo Academy of Medicine, following the diagnosis and prognosis of the flu epidemic, Revoredo, Meira and Monteiro listed the treatments for the “adult flu” based on the “opinion of the best authors and our modest personal experience” (REVOREDO; MEIRA; MONTEIRO, 1918, p. 5).

Despite its inaccuracy, the age group mentioned by the members of the committee may be considered an important indication of the concern expressed for the group that suffered the most fatalities through the Spanish flu around the world: young men and women aged between 15 and 40 years. This differed from the normal yearly flu pattern, with the most commonly affected victims being small children and people aged 65 and over (TAUBENBERGERT; MORENS, 2006), an issue that confused doctors in 1918 and continues to be the object of speculation. According to Killingray (2009, p. 49), a possible explanation is that “the immune system of young and healthy individuals can react vigorously to the infection, going into overdrive and finally a sudden collapse, resulting in the victim’s death”.¹¹

Returning to the considerations of Revoredo, Meira and Monteiro, for the “complicated forms” of the Spanish flu, these doctors recommended rest, attention to the functioning of the digestive system (moderate feeding), use of purgatives when necessary, and sudorifics, suggesting the following formula: “tincture of aconite, 15 drops; ammonium acetate 8.0; infusion of jaborandi 120.0; brandy syrup a^a; linden syrup 30.0” (1 tablespoon every two hours), and hot teas, especially cinnamon (which also had “first-rate stimulating properties”). Warning that care should be taken with regard to the use of antipyretics because “the flu is a depressive illness, with a marked tendency to lead to collapse”, they recommended the use of aspirin (with caffeine, a stimulant), because it had the advantage of relieving the body of the pains that were common at the onset of the disease (REVOREDO; MEIRA; MONTEIRO 1918, p. 5-6).

¹¹ Regarding the deadliness of the flu in 1918, see: Gibbs; Armstrong; Gibbs (2001) Kobasa, et al. (2007).

For victims of the “mild form”, after “a good sweat”, the committee members recommended tonics for the patient’s general health, especially the heart. They suggested doses of brandy, rum, port, champagne or grog (mixtures of alcoholic drinks diluted in hot water with sugar and lemon peel. They also recommended a potion with a combination of “ammonium acetate 8.0; cinnamon tincture a^a; da. of *quina* 5.0; bitter orange peel syrup 40.0; *quina* syrup 140.0” (1 tablespoon every two hours). These were two of the four times that *quina* was mentioned in the report¹² (REVOREDO; MEIRA; MONTEIRO, 1918, p.4-6. My emphasis). Thus, no special mention was made of quinine (or quinine salt), recommended in the “Communiqué of the State Sanitation Service”, and in the note “Advice for the People”, by in the considerations of the three doctors.

It should be borne in mind that, despite the Sanitation Service’s warning regarding the dangers of interrupting treatment with quinine (NOTÍCIAS DIVERSAS, 1918), several comments were published in the São Paulo press concerning the risks of ingesting this substance in excess, which could irritate the oral mucosa and lead to a loss of appetite, making flu victims weaker (INFLUENZA, 1918; MAIS RECEITAS, 1918). Revoredo, Meira and Monteiro may have been concerned about the harmful effects of the overuse of quinine salt, leading them not to recommend the substance very highly.

To end the recommendations for the “mild form” of the flu, the doctors made suggestions that might help to avoid the pulmonary complications of the disease. They recommended two sedative and expectorant potions: “tincture of aconite (10 drops), sodium benzoate 2.0; hydrolate of orange flowers 100.0; diacodium syrup 30.0; tolu (or Dessessartz) syrup 30.0” (1 tablespoon every two hours). They also included “terpin 1.0; cherry laurel water 3.0, brandy a^a, codeine syrup 30.0; linden hydrolate 100.0”, one tablespoon every two hours. They also recommended gargling with warm water with 1 tablespoon of hydrogen peroxide or fifteen drops of Phenosalyl. They also advised people to place “a warm compress around the neck” (REVOREDO; MEIRA; MONTEIRO, 1918, p.6-7). In making these recommendations, the committee commented on how the “mild form” of the flu was effectively complex:

The flu is a disease for which the main role of the doctor is to know how to prevent intelligently the complications that it brings and considering, on the other hand, *the marked frequency with which pulmonary forms have*

¹² In addition to this invigorating formula, quina was included in one of the prescriptions for nervous manifestations of the Spanish flu and in another for convalescents (REVOREDO; MEIRA; MONTEIRO, 1918, p.9-10). Some “industrialized” medicines recommended in the report could also contain the substance, such as Ionase. Cf. Rangel (1918).

emerged in the current epidemic, the early and systemic application of poultices appears to be very useful (...). (REVOREDO; MEIRA; MONTEIRO, 1918, p.6. My emphasis).

Thus, despite the claim that the recommended treatment for the “common flu” would avoid “in the vast majority of cases the fearful causes of so many deaths” (REVOREDO; MEIRA; MONTEIRO, 1918, p. 7), what the committee found was that, especially following the frequent “pulmonary complications”, it was effectively impossible to separate the “mild form” from the “complicated forms” of the Spanish flu.

As for the treatments for the “complicated forms” of the epidemic flu, Revoredo, Meira and Monteiros added to the treatments recommended for the “mild form” other procedures and products that could be used depending on how serious the case was and the history of the patient. These included: the Butantan hemostatic and antipneumococcal preparation; injections of camphor oil, ether or strychnine, turpentine syrup, adrenaline, digitoxin (cardiac tonic); Rivière’s potion (for gastric changes) and Todd’s potion (to combat lung ailments), and “anti-infective injections” of Ionase. They also recommended leeches on the chest and purgative enemas, in addition to the application of suction cups for pulmonary complications, bleeding for the most severe cases of uremia, sodium bicarbonate for diabetics and, in nervous manifestations, warm baths and ice on the head. They also stressed the danger of a relapse and, consequently, that it was important to remain alert during convalescence (REVOREDO; MEIRA; MONTEIRO, 1918, p. 7-10).

The recommendations of Revoredo, Meira and Monteiro to combat the “mild” and “complicated” forms of the flu included a total of almost 100 substances and medicines, with various dosages and combinations, as well as different procedures such as the application of suction cups and bleeding. However, despite the many complications and medicines and the various procedures, the three doctors defended the argument that the flu was not an illness that justified so much fear, as long as doctors acted against opportunistic infections (attention to the lungs was fundamental), looked after the heart, stimulated the patient’s defense mechanisms and was aware of the patient’s history.

It is not known whether Revoredo, Meira and Monteiro’s report was appreciated by doctors other than those at the APM meeting in November 1918, or whether the text circulated among doctors in the interior of São Paulo State. However, when reporting on the first four months of activities at the São Paulo Academy of Medicine in January 1919, Dr Rubião Meira stated that the “Diagnosis, prognosis and treatment of the flu” was published in its entirety in twice: in *Brazil Medico* and *O Estado de S. Paulo* (ACADEMIA, 1919).

The publication of the report in *Brazil Medico* (Rio de Janeiro), the most important Brazilian medical periodical of the day, represented a real possibility for the text to be appreciated by many other doctors. Publication in *O Estado de S. Paulo*, the leading daily newspaper in São Paulo (SOBRE, 1966), meant that the report was circulated and most likely used by doctors in different towns and cities, who would be sufficiently competent to translate the general indication of treatments into specific prescriptions for their patients.¹³

FINAL CONSIDERATIONS

“The flu that has just visited us, spreading throughout the towns of the interior, has clinical characteristics that cannot be confused with other morbid entities” (REVOREDO; MEIRA; MONTEIRO, 1918, p.1). The considerations of the report written by Galeno de Revoredo, Rubião Meira and Eduardo Monteiro opened with this sentence, presenting the diagnosis of the epidemic disease in a way that left no doubts or “confusion”.

Nevertheless, the fact that such words were written in a text by doctors for doctors and began a report written with the intention of serving as a guide for clinical treatment to combat the Spanish flu, may also have been an attempt to bring an end to any divergences that might still exist regarding the identification of the epidemic, divergences that arose throughout the epidemic period.

Before the outbreak of the Spanish flu in São Paulo, the city’s newspapers published the theory of Dr Ciauri, an Italian, according to whom the epidemic was caused by “a completely new germ in human pathology” (O PROFESSOR, 1918, p. 3). This idea was supported by his compatriot Dr Ciancio, who speculated on the alleged morphology of this microbe, methods for its coloring, culture media, etc. (DESCOBRIU-SE, 1918, p. 1). This information attracted the attention of the medical and scientific community in São Paulo and nationwide, leading them to exercise caution, as they called for further evidence; but this evidence never came (BERTUCCI, 2004; SILVEIRA, 2009).

On the 5th of November, during the worst period of the epidemic in the city of São Paulo, Dr Arnaldo Vieira de Carvalho declared that it was possible that two epidemic diseases were afflicting the residents of the state capital. According to Carvalho,

¹³ Owing to the language of the report, the risk of it being used by “laymen” (quackery) could not have been considered great; otherwise it would have been unlikely for the members of the APM to allow it to be printed in a daily newspaper. Furthermore, it is necessary to consider the exceptional situation of the epidemic, which must have contributed to this publication.

necroscopic examinations led to the assumption (the term employed by the doctor) that two epidemics were raging in the city: one of influenza and one of pneumonia (A NATUREZA, 1918; DUAS, 1918). Several of his colleagues voiced their disagreement: there were many cases of pneumonia influenza and several cases of pneumonia, but not two epidemics (SESSÃO, 1918a).

In this context, Revoredo, Meira and Monteiro's claim that the "clinical characteristics" of the 1918 flu could not be confused with another disease reaffirmed the viewpoint of the vast majority of doctors regarding the nature of the epidemic: it was a flu. However, this did not help to explain how a flu could claim so many victims. According to the writings of Dr B. C. Crowell, an anatomopathologist at the Oswaldo Cruz Institute, when reporting on his work during the Spanish flu, there was a "notable similarity in the cases" that were studied. However, it was necessary to acquire "more accurate knowledge of the etiology [of the flu]" to confirm that only one morbid entity was responsible for the death toll (A GRIPPE, 1918b).

Thus, the text written by Revoredo, Meira and Monteiro to aid doctors in the interior of the state could have helped to divulge and legitimize among their colleagues the perspective that the epidemic was a flu.¹⁴ However, the lack of consensus on the etiology of the disease continued to motivate discussions and research.

The search for knowledge regarding the etiology of the flu mobilized some Brazilian medical researchers during the outbreak of the Spanish flu, especially at the Oswaldo Cruz Institute in Rio de Janeiro. Research related to Pfeiffer's bacillus (*Haemophilus influenzae*), which had been announced as the cause of the flu in 1892, were countered by those that argued that the disease was caused by a filtrable virus (BERTUCCI, 2014).¹⁵

In late November 1918, when the "Diagnosis, prognosis and treatment of the flu" was presented to the São Paulo Academy of Medicine, the epidemic was in decline in most of the country. At that time, Brazilian research on flu also ceased. Flu, a common disease, generally without great risk, but which can end up killing many people. That is

¹⁴ See in Latour (2000) considerations on the relationships built in the production and diffusion of scientific knowledge, relationships not previously determined.

¹⁵ Regarding the studies conducted in Brazil, the research at the Oswaldo Cruz Institute by Aristides Marques da Cunha, Olympio da Fonseca and Octavio de Magalhães (from the Belo Horizonte branch), on a filterable influenza virus, later gained international recognition (BERTUCCI, 2014). In 1933, during the first flu epidemic post-Spanish flu, a group from the London Medical Research Council, led by Drs Christopher Andrewes, Wilson Smith and Patrick Laidlaw, identified a filterable virus, *Myxovirus influenzae*, as the etiological agent of the disease in human beings (OLDSTONE, 1998).

what happened, on an unimaginable scale and so quickly around the world, in the second half of 1918 and January 1919 (KILLINGRAY, 2009).

In the city of São Paulo, by the end of the epidemic in mid-December 1918, 116,777 cases of Spanish flu were recorded, of which 5,331 patients died, around 1% of the total population. Other deaths recorded by the 31st of December, which could be associated with Spanish flu were: 1,192 from influenza pneumonia, 273 from pneumonia, 125 from influenza bronchopneumonia and 257 from bronchopneumonia (MEYER; TEIXEIRA, 1920).

REFERENCES

- A EPIDEMIA reinante. Indicadores de Hospitais e Postos. **O Estado de S. Paulo**, São Paulo, 1º nov. 1918, p.5.
- A GRIPPE espanhola. Resposta. **O Estado de S. Paulo**, São Paulo, 3 out.1918a, p.4.
- A GRIPPE. **O Estado de S. Paulo**, São Paulo, 2 dez. 1918b, p. 4.
- A INFLUENZA espanhola. Comunicado do Serviço Sanitário. **O Estado do S. Paulo** São Paulo, 16 out. 1918a, p. 5.
- A INFLUENZA espanhola. **O Estado de S. Paulo**, São Paulo, 24 set. 1918b, p. 1.
- A NATUREZA da moléstia reinante **O Estado de S. Paulo**, São Paulo, 5 nov. 1918, p. 4.
- ABRÃO, Janete Silveira. **Banalização da morte na cidade calada**. Porto Alegre: EDIPUCRS,1998.
- ABREU JUNIOR, José Maria de Castro. **O vírus e a cidade**. Belém: Editora Paka-Tatu, 2019.
- ACADEMIA Paulista de Medicina. **Correio Paulistano**, São Paulo, 29 jan. 1919, p. 3.
- BERTOLLI FILHO, Cláudio. **A gripe espanhola em São Paulo, 1918: epidemia e sociedade**. São Paulo: Paz e Terra, 2003.
- BERTUCCI, Liane Maria. A onipresença do medo na influenza de 1918. **Varia História**, Belo Horizonte, v. 25, n. 42, p. 457-475, 2009.
- BERTUCCI, Liane Maria. **Influenza, a medicina enferma**. Campinas: Editora Unicamp, 2004.
- BERTUCCI, Liane Maria. Spanish Flu in Brazil: searching for causes during the epidemic horror. In: PORRAS-GALLO, María-Isabel; DAVIS, Ryan A. (Eds.). **The Spanish Flu Influenza Pandemic of 1918-1919**. Rochester: University of Rochester Press, 2014, p. 39-55.

BRASIL. **Decreto nº 13.092, de 10 de julho de 1918.** Crêa uma missão medica especial à França, em caracter militar, e dá outras providencias. Disponível em: <https://www2.camara.leg.br/legin/fed/decret/1910-1919/decreto-13092-10-julho-1918-58316>. Acesso em: 10 dez. 2020.

BRITO, Nara de Azevedo. “La dançarina”: a gripe espanhola e o cotidiano na cidade do Rio de Janeiro. **História, ciências, saúde - Manguinhos**, Rio de Janeiro, v. IV, n. 1, p. 11-30, 1997.

BRUM, Cristiano Enrique de. A medicina vai à Guerra: a Missão Médico-Militar brasileira na França durante a Primeira Guerra Mundial (1918-1919). **História: Debates e Tendências**, Passo Fundo, v.14, p.306-317, 2014.

DESCOBRIU-SE o micróbio da influenza espanhola? **O Combate**, São Paulo, 27 nov. 1918, p. 1.

DUAS entidades mórbidas. **A Platéia**, São Paulo, 5 nov. 1918, p. 6.

ECHEVERRI DÁVILA, Beatriz. **La gripe española.** La pandemia de 1918-1919. Madrid: Siglo XXI, 2003.

EDGERLY, E. T.; MANSON, F.M.; CARR, J. G. The influenza-pneumonia epidemic at Camp Dodge, Iowa, 1918. **The American Journal of the Medical Sciences**, Philadelphia, v. CLVIII, p. 212-216, 1919.

ESTÁ FUNDADA a Academia Paulista de Medicina. **O Combate**, São Paulo, 14 ago. 1918, p.1.

GIBBS, Mark J.; ARMSTRONG, John S.; GIBBS, Adrian J. Recombination in the hemagglutinin gene of the 1918 “Spanish Flu”. **Science**, New York, n. 293, p.1842-1845, 2001.

GOULART, Adriana da Costa. **Um cenário mefistofélico: a gripe espanhola no Rio de Janeiro.** Dissertação (Mestrado em História) - Universidade Federal Fluminense, Niterói, 2003.

GOVERNO do Estado. **O Estado de S. Paulo**, São Paulo, 14 nov.1918, p.4.

GRIPPE espanhola. Boatos... **O Estado de S. Paulo** São Paulo, 8 out. 1918, p. 4.

INFLUENZA espanhola e sais de quinina. **A Gazeta**, São Paulo, 19 out 1918, p. 1.

KILLINGRAY, David. A pandemia de gripe de 1918-1919: causas, evolução e consequências. In: SOBRAL, José Manuel; LIMA, Maria Luísa; CASTRO, Paula; SOUSA, Paulo Silveira e. (Eds.) **A pandemia esquecida.** Lisboa: Imprensa de Ciências Sociais, 2009, p. 41-61.

KOBASA, Darwyn et al. Aberrant innate immune response in lethal infection of macaques with the 1918 influenza virus. **Nature**, London, v. 445, p. 319-323, 2007.

LATOUR, Bruno. **Ciência em ação.** São Paulo: Editora Unesp, 2000.

MAIS RECEITAS ao alcance do povo. **A Platéia**, São Paulo, 23 out 1918, p. 1.

MEYER, C. L.; TEIXEIRA, J. R. **A gripe epidemica no Brazil e especialmente em São Paulo.** São Paulo: Casa Duprat, 1920.

MISSÃO Médica Brasileira. **Revista de Medicina**, São Paulo, v. II, n. 9/10, p.74-77, ago.-set. 1918.

- NOTÍCIAS DIVERSAS. **O Estado de S. Paulo**, São Paulo, 29 out. 1918, p. 3.
- NOTÍCIAS. A gripe espanhola. **A Platéia**, São Paulo, 8 nov. 1918, p. 6.
- O PROFESSOR Ciauri. **A Capital**, São Paulo, 4 out. 1918, p. 3.
- OLDSTONE, Michael B. A. **Viruses, plagues, and history**. Oxford: Oxford University Press, 1998.
- PROPHYLACTIC quinine in Influenza. **The Lancet**, London, v. CCVII, n. II, p. 1152, 1924.
- RANGEL, Orlando. Pneumonias e broncopneumonias. **O Estado de S. Paulo**, São Paulo, 22 nov. 1918, p. 5.
- REVIEWS. **The British Medical Journal**, London, v. I, p.2, jan./jun. 1922.
- REVOREDO, Galeno de; MEIRA, Rubião; MONTEIRO, Eduardo. Diagnostico, prognostico e tratamento da gripe. **Annaes da Academia Paulista de São Paulo**, São Paulo, [s.n.], ago./dez. 1918, p.1-10.
- SÃO PAULO. **Relatorio apresentado ao Exmo. Snr. Dr. Altino Arantes, presidente do Estado pelo Secretario do Interior Oscar Rodrigues Alves. Anno 2018**. São Paulo, [s.n.], 1919.
- SEIDL, Carlos. **A proposito da pandemia de gripe em 1918**. Rio de Janeiro: Typ. Besnard Frères, 1919.
- SESSÃO extraordinária de 30 de novembro de 1918. **Annaes da Academia Paulista de Medicina** São Paulo, [s.n.], ago./dez. 1918a, p.41-43.
- SESSÃO ordinária de 25 de novembro de 1918. **Annaes da Academia Paulista de Medicina** São Paulo, [s.n.] ago./dez. 1918b, p. 40-41.
- SESSÃO ordinária de 25 de setembro de 1918. **Annaes da Academia Paulista de Medicina** São Paulo, [s.n.] ago./dez. 1918c, p.33-36.
- SILVEIRA, Anny Jackeline Torres. **A influenza espanhola e a cidade planejada**. Belo Horizonte: Argumentum, 2008.
- SODRÉ, Nelson Werneck. **A história da imprensa no Brasil**. Rio de Janeiro: Civilização Brasileira, 1966.
- SOUZA, Christiane Maria Cruz de. **A gripe espanhola na Bahia: saúde, política e medicina em tempos de epidemia**. Rio de Janeiro: Editora Fiocruz, 2009.
- TAUBENBERG, Jeffery K.; MORENS David. 1918 influenza: the mother of all pandemics. **Emerging Infectious Diseases**, Atlanta, n. 12, p. 15-22, 2006.

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