

Post-Polio Syndrome: Situation in Spain and action proposals

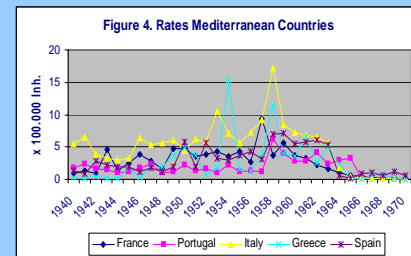
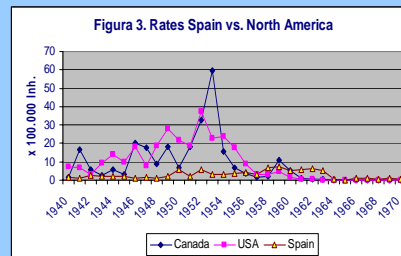
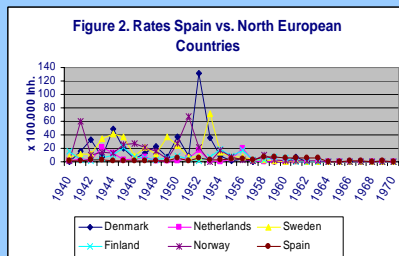
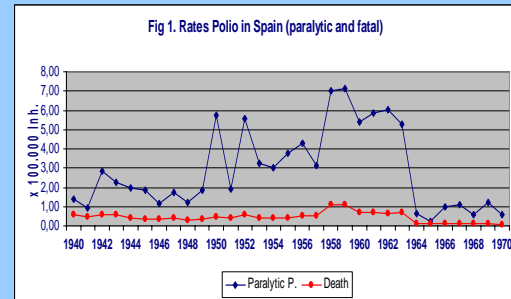
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The impact of the great polio epidemics in Spain is depicted in Figure 1, which shows incidence rates that are relatively low, but long lasting, as national massive vaccination campaigns were not applied until 1963, after the authorization of the Sabin vaccine by the FDA in 1962.

However, the polio epidemic that took place in Spain in the 1950's, like in other Mediterranean countries, had a lower incidence than in Northern Europe or North American countries, all of which are grouped in three categories according to their different levels of incidence (Figures 2-4). This may explain why, even nowadays, the Post-Polio Syndrome (PPS) is not a standardised condition in the framework of social and healthcare assistance, but is generically included in the context of poliomyelitic sequelae, even in strategic public documents of the Spanish Society of Neurology.



Ordered by the Parliament, the Ministry of Health requested a report from our Agency concerning the situation of PPS in Spain: nature, epidemiology, and proposals for healthcare and social services for affected individuals.

The analysis of the National Database of people with a disability allows for an estimation of the number of cases that are susceptible to suffer PPS. To this end, we have applied the limits of the range of the prevalence found in literature to the disability cases diagnosed with poliomyelitis, either as a main or secondary diagnosis; i.e., the only cause of deficiency or a concurrent cause with other causes.

Table 1. Estimation of PPS cases in Spain

Characteristics	No. of cases
Disabled with a diagnosis of polio only	19,504
Disabled diagnosed with polio, among other illnesses	25,047
Total of disabled people with a polio diagnosis	44,551
Range of prevalence of PPS quoted in literature	20% - 35%
Range of predictable cases in Spain	8,910 - 37,868

Table 1 shows the corresponding data, after minimizing the main limitations of the database, such as:

- The DB is static: it records the known disability cases, but not the drops due to death. Therefore, we used the publication from the year 2000 because, given the season in which the major polio epidemics took place, it may be estimated that during that time, the figures of survivors with sequelae were very close to the actual ones.
- The DB records the disability cases with a grade >33% that were assessed in all of Spain, which is why, given the endpoints (ICF) of the disabilities due to neuromuscular deficiencies, practically any paralytic sequelae are recorded. On the other hand, the hypothesis that PPS can affect patients who have suffered the variant of polio without paralysis is seriously questioned. In conclusion, it can be assumed that, given the amplitude of the range of the prevalence rates, any broadening thereof based on what could be due to poliomyelitis without paralysis, seems highly speculative.

Current Situation in Spain

- The knowledge of PPS as a specific entity among healthcare professionals is irregular. A static concept of the poliomyelitis sequelae - considered a remnant of the past- prevails, which is why they focus their attention on other neurological diseases.
- This lack of interest is manifested by the fact that there are few research initiatives on this topic that the health administration does not foster either.
- No normalized diagnostic criterion explaining legal effects such as: a new assessment of the degree of disability, an assessment of work disability or anticipated retirement, have been adopted.
- Thus, the criteria applied are at the discretion of the assessment teams and are generally very restrictive, which results in a wide variability and a lack of equity among patients.
- The possible number of affected people is ignored. The first estimation on the subject is the one put forth in our study.

Action proposals

- To create a national registry of polio survivors that allows for the knowledge of the affected population, their follow-up and, if applicable, the course of the PPS.
- To promote the normalization of the terminology and diagnostic criteria, with particular attention to objective evaluation techniques, such as electromyography and nerve-conduction studies or ischemic exercise tests.
- To promote the normalization of procedures. This demands the adoption of objective instruments to categorize patients in rehabilitation services, both for their clinical application as well as to design research studies.
- To adopt validated scales for the evaluation of alterations and disabilities and, consequently, of the results of the interventions performed.
- Institutional information to the primary care physicians about late disorders associated to poliomyelitis that facilitates the management of these patients and refer them, if pertinent, to reference consultations.
- Institutional information to associations of patients affected by PPS and counseling that could be given to their associates.
- Cooperation between administrations of Work, Health and Social Affairs, in order to normalize the conditions of reassessment of the degree of disability.