INTERNATIONAL SEVEN JOURNAL
OF HEALTH RESEARCH
ISSN: 2764-9415

Importance of vaccine coverage against poliomyelitis

Importância da cobertura vacinal contra a poliomielite

DOI: 10.56238/isevjhv3n1-018
Receipt of originals: 16/01/2024
Publication acceptance: 06/02/2024

Bianca Figueiredo Pereira[1], Francisco Herman Stertz[2], Gabriely Leticia Simon[3], Janete Rodrigues[4], Solange Bortoli Beal[5], Carolina Azeredo Silva[6].

ABSTRACT

Poliomyelitis is an acute contagious viral disease that can affect children and adults, causing sequelae, especially in the most severe cases. There is no specific treatment, prevention is extremely important. The study had an exploratory character, through a bibliographic review based on references published in the Scielo, Google Scholar and VHL data. With the qualitative, descriptive and exploratory methodology used, the objective was to guide the population of a Basic Health Unit (BHU) in a municipality in the Midwest of Santa Catarina about the importance of poliomyelitis vaccination, as well as the consequences of the disease, since the vaccination coverage of the BHU is below the parameters established by the Ministry of Health (MS). The extension actions to achieve this objective were orientations in the UBS referred to, involving a group of family members who accompanied the children to medical appointments. It is concluded that the population is unaware of the seriousness of this problem, and that several diseases that previously affected the population very aggressively, today can be considered eradicated, as is the case of poliomyelitis if we achieve good vaccination coverage.

Keywords: Poliomyelitis, Vaccination coverage, Prevention, Information.

[1] Medical student
University of Alto Vale do Rio do Peixe – UNIARP
ORCID: 0009-0003-1565-2415
E-mail: biancapereiratp@hotmail.com
[2] Medical student
University of Alto Vale do Rio do Peixe – UNIARP
ORCID: 0009-0005-0800-9493
E-mail: chicostertz@hotmail.com
[3] Medical student
University of Alto Vale do Rio do Peixe – UNIARP
ORCID: 0009-0003-1574-3157
E-mail: gabysimon.smo@gmail.com
[4] Preceptor of the Medicine course
University of Alto Vale do Rio do Peixe – UNIARP
ORCID: 0009-0003-5922-6952
Email: Gonçalves.jrg@hotmail.com
[5] Nurse and Master's student UNIARP
University of Alto Vale do Rio do Peixe – UNIARP
ORCID: 0009-0000-1739-2790
E-mail: Solange.bortoli@uniarp.edu.br
[6] Nutritionist and Master's student at UNIARP
University of Alto Vale do Rio do Peixe – UNIARP
ORCID: 0009-0009-9137-4764
E-mail: carolina_azeredo@outlook.com

INTRODUCTION

Poliomyelitis is a systemic viral disease that affects the nervous system with greater incidence, and is also called infantile paralysis, caused by one of the human polioviruses, belonging to the Picornaviridae family. Transmission occurs through the fecal-oral route, as a result of poor personal hygiene, improper deposition of human feces, improperly handled sewage, in addition to possible contamination through water and food, which tend to favor the spread of the wild virus, maintaining the disease in the community (Porto, 2022).

Its highest frequency is in children, it can be classified into paralytic poliomyelitis (5 to 10% of cases) and non-paralytic poliomyelitis (90 to 95% of cases (Porto, 2022).

Its clinical presentation, presented in only 10% of infected patients, can have 3 forms: abortifacient, paralytic and polyencephalitis. The first form manifests itself with fever, malaise, anorexia, headache and pain in various places, with complete recovery after 2 to 3 days. Aseptic meningitis, neck stiffness, and cerebrospinal fluid (CSF) analysis shows pleocytosis due to lymphomononuclear cells, normal protein and glucose (Porto, 2022).

The second presentation occurs in 0.1% of the patients with acute flaccid paralysis (AFP). It includes spinal poliomyelitis, bulbar poliomyelitis (may corroborate with respiratory paralysis) and polioencephalitis. Has muscle group involvement, of only one muscle or multiple muscles, with flaccid paralysis, diminished or absent reflexes. Limbs can atrophy, can affect the ability to develop and present deformities in children (Porto, 2022).

The latter form, Polioencephalitis, is rare and presents manifestations common to any viral encephalitis (Porto, 2022).

As for the treatment, it is not specific, and early rehabilitation should be done, with rest and respiratory and cardiovascular support (mainly in the bulbar and bulbospinal cords) when necessary. Prognostically the compromised muscles recover in 60% of cases in 3 to 4 months (Porto, 2022).

Poliomyelitis can cause several sequelae that are related to the infection of the spinal cord and brain by the poliovirus, they are usually motor and do not have a total cure. The main sequelae are problems and pain in the joints, clubfoot, known as equine foot, in which the person cannot walk because the heel does not touch the ground, different growth of the legs, which causes the person to limp and lean to one side, causing scoliosis, osteoporosis, paralysis of one of the legs, paralysis of the speech and swallowing muscles, which causes accumulation of secretions in the mouth and throat, difficulty speaking, muscle atrophy, hypersensitivity to touch.

In addition to all the sequelae already mentioned, poliomyelitis has a direct impact on an individual's quality of life, employability, and social aspects (Brasil, 2022).

The sequelae of poliomyelitis are treated through physiotherapy, through exercises that help develop the strength of the affected muscles, in addition to helping with posture, thus improving the quality of life and reducing the effects of the sequelae. In addition, the use of medications to relieve muscle and joint pain may be indicated (Brasil, 2022).

Vaccination is the only way to prevent poliomyelitis and avoids all the problems mentioned above. All children under five years of age should be vaccinated according to the routine immunization schedule and in the annual national campaign. The vaccination schedule against poliomyelitis consists of three doses of the injectable vaccine – VIP (at 2, 4 and 6 months) and two more booster doses with the bivalent oral vaccine – PWV (droplet) at 15 months and 4 years of age (Brasil, 2022).

In Brazil, since the early 1990s, there have been no cases of wild poliovirus in Brazil, due to vaccination coverage (Porto, 2022).

As of September 14, 2022, the municipality of Fraiburgo had reached only 52% vaccination coverage, well below expectations (Brasi, 2022).

Considering that vaccination is the only form of prevention and vaccination coverage is below the parameters recommended by the Ministry of Health, the population should be made aware and stimulated to carry it out, thus achieving the highest possible coverage in all municipalities, and in this case, in the municipality of the Midwest of Santa Catarina, which was the objective of the integrative project.

In addition, the present study is of great relevance because vaccines save lives, are safe, do not cause disease, and protect the community. According to the World Health Organization, many deaths from preventable diseases are prevented thanks to vaccines.

METHODOLOGY

The methodology of the present project was developed through bibliographic research, with data collection on the poliomyelitis vaccine in a municipality in the midwest of Santa Catarina.

The method was defined through the analysis of data from the National Immunization System, specifically from the municipality in question, with 36,584 thousand inhabitants. According to the latest survey by the municipality's Epidemiological Surveillance, released on

September 14, 2022, the municipality had reached only 52% coverage for the referred age group, well below the 95% recommended by the Ministry of Health.

The application of the project took place at the municipality's UBS through guidance in conversation circles, mainly involving parents and guardians of children up to 5 years of age, the target audience of the vaccine. On the occasion, followed by guidance and awareness on the importance of vaccination, an information folder was prepared (Figure 1), which was distributed to the population, facilitating communication and understanding of the public present. In addition, a banner was made to raise awareness about the importance of vaccination against poliomyelitis, which was used in health events and later made available at the UBS in question.

All children under the age of 5 must be properly protected, which prevents polio from thriving. "The application of the polio vaccine is a milestone in scientific and public health history.

Ethical aspects were respected. The preceptors of the UBSs were approved to carry out the project.

RESULTS AND DISCUSSIONS

Specific actions were carried out at the UBS and at health events with the objective of guiding the population registered at the UBS on the importance of updating the vaccination record of children up to 5 years of age, with emphasis on vaccination against Poliomyelitis (infantile paralysis).

Considering the actions carried out both at the UBS and at other health events, it was possible to provide important information, answer questions and guide parents and family members of children up to 5 years of age regarding the importance of vaccination against Poliomyelitis.

It was noticed that the distancing from health services, caused by the COVID 19 pandemic, compromised the success of vaccination coverage. There is an urgent need to rescue these inequities in access to vaccines.

Vaccination is the only way to prevent poliomyelitis and other diseases covered by immunizers. Actions such as these contribute to catching up on delays, which is why the relevance of actions to sensitize and raise awareness of the population is justified, thus avoiding the possibility that some diseases considered eradicated will circulate again or those that came with low rates will increase.

Figure 1: Who cares for the vaccine.

Source: The authors (2022).

FINAL THOUGHTS

Poliomyelitis is a contagious viral disease that can have serious consequences for those affected, and the only way to have effective control is through vaccination. Thus, raising awareness among the population with coherent, scientifically based information is extremely important for satisfactory vaccination coverage.

REFERENCES

Brasil. Ministério da Saúde. (2022). *Programa Nacional de Imunização*. Brasília. Disponível em: https://www.gov.br/saude/pt-br/acesso-a-informacao/acoes-e-programas/programa-nacional-de-imunizacoes-vacinacao. Acesso em: 02 nov. 2022.

Brasil. Ministério da Saúde. (2022). Ministério da saúde prorroga campanha nacional de vacinação contra poliomielite e multivacinação até 30 de setembro. *Ministério da Saúde*. Brasília. Disponível em: https://www.gov.br/saude/ptbr/assuntos/noticias/2022/setembro/ministerio-da-saude-prorrogacampanha-nacional-de-vacinacaocontra-poliomielite-emultivacinacao-ate-30-de-setembro. Acesso em: 18 set. 2022.

Brasil. Ministério da Saúde. (s.d.). *Biblioteca virtual da Saúde. Poliomielite (paralisia infantil)*. *Biblioteca Virtual em Saúde MS*. Disponível em: https://bvsms.saude.gov.br/poliomieliteparalisiainfantil/#:~:text=A%20poliomielite%2C%20tamb%C3%A9m%20chamada%20de,e%20provocar%20ou%20n%C3%A3o%20paralisia. Acesso em: 18 set. 2022.

Porto, C. C., & Porto, A. L. (2022). *Clínica Médica na Prática Diária* (E-book). Rio de Janeiro. ISBN 9788527738903. Disponível em: https://integrada.minhabiblioteca.com.br/#/books/9788527738903/. Acesso em: 20 set. 2022.