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NATIONAL OVERVIEW OF MENINGITIS NOTIFICATIONS: TEMPORAL, REGIONAL AND SOCIODEMOGRAPHIC PROFILE (2014–2024)

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Introduction/Objectives: Meningitis is an infection of the meninges, the membranes that envelop the brain and spinal cord, characterized by high morbidity and mortality and a risk of severe neurological sequelae. Despite the availability of vaccines, cases remain frequent in Brazil. This study aimed to analyze the national panorama of meningitis notifications between 2014 and 2024, assessing temporal and regional distribution, sociodemographic profile, etiology, diagnostic methods and clinical outcomes.

Methods: Exploratory, descriptive and quantitative study using secondary data obtained from the DATASUS system, covering the entire national territory. Variables analyzed included region, race/skin color, sex, age group, etiology, diagnostic methods, serotyping, confirmatory methods and case evolution. Statistical analysis was performed in Microsoft Excel using Student's *t*-tests and ANOVA. A p-value <0.05 was considered statistically significant, with a 95% confidence interval.

Results: Between 2014 and 2024, 148,979 meningitis cases were notified in Brazil. The years 2014 and 2018 had the highest rates (11.9% each), followed by 2017 (11.5%) (p=0.57). The Southeast (53.6%) and South (21.9%) regions concentrated most cases (p<0.05). With regard to race/skin color, there was a predominance among White (46.8%) and Brown (31.4%) individuals (p=0.79). Males were more affected (58.7%; p=0.06). The most affected age groups were young adults (20–39 years, 19.6%) and children aged 1–4 years (17.3%) (p<0.05). Viral meningitis (45.6%) and meningitis of unspecified cause (16.4%) were the most frequently notified (p<0.05), highlighting weaknesses in diagnostic methods and etiologic identification. Serotyping was omitted in 96.9% of records; among typed cases, serogroups C (1.8%) and B (1.0%) were the most prevalent (p<0.05). The most frequently used confirmatory methods were cytochemical CSF analysis (60.1%) and culture (12.5%) (p<0.05). Hospital discharge was the most common outcome (76.9%; p<0.05).

Conclusion: The study reveals a high incidence of meningitis in the period analyzed, with greater impact among men and children. Limitations in etiologic identification and the high rate of incomplete records reinforce the need to improve diagnostic methods and prevention strategies, especially in terms of epidemiological surveillance and vaccination coverage.

Keywords: Meningitis, Incidence, Epidemiological monitoring.

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CLINICAL AND MICROBIOLOGICAL PROFILE OF COMMUNITY-ACQUIRED PNEUMONIA COMPLICATED BY STREPTOCOCCUS PNEUMONIAE IN A PEDIATRIC HOSPITAL

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Introduction: Community-acquired pneumonia (CAP) is the leading infectious cause of childhood mortality. Although Streptococcus pneumoniae is the most common agent, its detection by culture is uncommon. Complicated CAP (cCAP) includes manifestations such as pleural effusion, empyema, lung necrosis and abscess. As a severe condition associated with prolonged hospitalization, understanding the clinical and microbiological profile of these patients is essential to guide treatment and improve outcomes.

Objective: To analyze the clinical and microbiological profile of patients with cCAP with isolation of S. pneumoniae in a pediatric-only hospital in southern Brazil.

Methods: Analytical, observational, cross-sectional and non-interventional study with data collection from medical records of patients diagnosed with cCAP and positive sterile-site cultures for S. pneumoniae, hospitalized between July 2021 and July 2024. The study was approved by the Ethics Committee (CAAE 7.116.953).

Results: We identified 43 patients with CAP and isolation of S. pneumoniae, of whom 32 (74.4%) had complications, mainly pleural effusion. Procedures such as drainage were performed in 30 cases, and 15 had lung necrosis. The mean age was 40 months; 65% (n=21) of patients were treated under the public health system (SUS). Among the 30 patients who underwent drainage, the pathogen was isolated from pleural fluid in 16 (53%) patients, only from blood in 9 (30%) patients, and from both samples in 5 (17%). Of the 32 cCAP cases, 25 (78%) required ICU admission (for an average of 8 days). Regarding penicillin susceptibility, 15% were susceptible, 62.5% showed susceptible-increased exposure (I) and 21.8% were resistant. For ceftriaxone, there was no resistance: 66% were I and 34% susceptible. All isolates were susceptible to vancomycin. The serotypes identified in complicated cases were: 19A (47%; n=15), 3 (13%; n=4), all with necrosis, 14 (9%; n=3), 6C (6%; n=2), 15B (3%; n=1), 15F (3%; n=1); in 6 cases (19%), serotype was not identified.

Conclusion: cCAP due to S. pneumoniae predominantly affects children under 5 years of age, with a high frequency of invasive interventions and variability in susceptibility profiles. Serotype 19A was the most common, underscoring the importance of microbiological surveillance and adequate vaccine coverage.

Keywords: Community-acquired pneumonia, Streptococcus pneumoniae, Pediatrics.

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CLINICAL-EPIDEMIOLOGICAL PROFILE OF MENINGITIS IN A UNIVERSITY HOSPITAL IN SÃO PAULO BETWEEN 2020 AND 2024

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Introduction/Objective: Meningitis is a disease subject to immediate compulsory notification, with outbreak potential. This study aimed to describe the clinical-epidemiological profile of meningitis cases and their etiologies in a tertiary teaching hospital in São Paulo between 2020 and 2024.

Methods: Retrospective descriptive study of meningitis cases identified and followed at a university hospital in São Paulo. Data sources were the Notifiable Diseases Information System (Sinan) and the institution's medical records. Analyses were performed using Microsoft Excel®.

Results: A total of 103 cases were notified. Mean age was 35 years (range 0–78), with predominance of males (57%). The most frequent signs and symptoms were fever (71%), headache (69%), neck stiffness (52%), vomiting (26%) and photophobia (24%). Seizures, petechiae and coma occurred in 4% of cases; classic meningeal signs in 3%. Among laboratory-confirmed cases, the most frequently identified etiologies were bacterial (62%), especially Streptococcus pneumoniae (26%), Neisseria meningitidis (19%) and Haemophilus influenzae (11%). In 35% of cases, it was not possible to identify the causative agent. Among patients, 18% were people living with HIV, 11% had active or previous tuberculosis, and 9% were under other forms of immunosuppression. Data on comorbidities were missing in 23% of cases. Regarding cerebrospinal fluid appearance, 42% were turbid, 36% clear, 4% purulent and in 3% there was no record. Clinical outcomes were: 63% discharged with complete recovery, 13% with neurological sequelae and 18% died; in 6% of cases, the outcome was not recorded.

Conclusion: There was a predominance of cases in male patients, adults, with typical symptoms such as fever, headache and neck stiffness. The most frequent etiology was bacterial, with a considerable percentage of cases without etiologic definition. The presence of comorbidities such as HIV and tuberculosis was relevant, as well as the high rate of deaths and neurological sequelae, reflecting disease severity. These findings reiterate the need for continuous epidemiological surveillance, early diagnosis and immediate therapeutic management. However, incomplete notification forms hindered more robust data analysis, compromising the effectiveness of public health actions.

Keywords: Meningitis, Epidemiology, Surveillance, Notifiable disease.

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CLINICAL-EPIDEMIOLOGICAL PROFILE OF THE FIRST MPOX CASES SEEN AT A SPECIALIZED SEXUALLY TRANSMITTED INFECTION UNIT

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Introduction: Mpox (formerly monkeypox) has emerged as an infection in the context of sexually transmitted infections (STIs), particularly among vulnerable populations. Specialized STI services play a crucial role in the early identification and management of cases.

Objective: To describe the clinical-epidemiological profile of the first mpox cases seen in an STI clinic, with emphasis on clinical manifestations, coinfections and management strategies.

Methods: Retrospective descriptive study based on the analysis of 168 suspected mpox cases seen between May and December 2022. Diagnosis was confirmed by real-time polymerase chain reaction (PCR), performed on material collected from skin lesions and crusts. Sociodemographic, clinical, behavioral and laboratory variables were analyzed, with emphasis on STI coinfections and use of prophylaxis.

Results: Of the 168 suspected cases, 131 (77.9%) were confirmed as mpox. Most confirmed cases were male (n=93), predominantly aged 30–39 years. One hundred and six reported having sex with men, and 59 reported 2 to 5 partners in the three weeks prior. The most common clinical manifestations were lymphadenopathy (n=106), hyperthermia and headache/asthenia. Skin lesions included papules (n=79), vesicles (n=73) and crusts (n=65), predominantly located in the genital region (n=104) and on the face (n=25). The main associated diagnosis was recent latent syphilis, observed in both groups (confirmed and discarded). The treponemal test was reactive in 52 of the confirmed cases and 10 of the discarded cases. In