EPIDEMIOLOGICAL AND ECONOMIC ANALYSIS OF HOSPITALIZATIONS FOR CELLULITIS AND ERYSIPELAS FROM THE PERSPECTIVE OF A BRAZILIAN HEALTH INSURANCE COMPANY

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INTRODUCTION

According to the Food and Drug Administration (FDA), acute bacterial skin and skin structure infections (ABSSSI) include cellulitis, erysipelas, large skin abscesses, and wound infections, characterized by lesions with a minimum area of 75 cm². [1] Cellulitis and erysipelas are among the most common skin infections, with an annual incidence reaching 200 cases per 10,000 individuals. [2] Diagnosis is predominantly clinical, based on the presence of erythema, edema, and increased local temperature. [3]

These infections represent a significant cause of morbidity and can progress to severe complications, such as bacteremia, endocarditis, septic arthritis, osteomyelitis, metastatic infections, sepsis, and toxic shock syndrome. The standard treatment involves empirical antibiotic therapy targeting the most frequently involved pathogens. [3]

It is estimated that cellulitis and erysipelas account for up to 10% of hospital admissions, highlighting the importance of early diagnosis and appropriate management to prevent disease progression, reduce complications, and minimize healthcare resource utilization. [3,4]

OBJECTIVE

To evaluate the demographic profile, use of resources and costs associated with hospitalizations for cellulitis and erysipelas.

METHODS

A retrospective multicenter observational study was carried out in hospitals in a metropolitan region, with epidemiological and hospitalization cost data provided by Unimed Campinas, from 12/2021 to 11/2024. Hospitalizations with primary diagnoses (ICD-10 L03 and A46) were included.

RESULTS

The study covered 15 centers, 230 beneficiaries, 51% of whom were women. Around two thirds were over 65, a quarter were aged 45-64, 8% were aged 18-44 and 1% were under 18. There were 38 readmissions (16.52%), more than three quarters of which were in patients over 65. Around 29.71% of the costs were for daily ICU fees. The average length of stay was 9 days, and the hospitalization costs amounted to US$ 815.893,34, with an average of US$3.547,36 per patient. Patients over 65 accounted for 71.15% of total costs

The costs were broken down into admissions (US$541.841,21), medicines (US$93.324,02), exams (US$67.597,81), materials (US$57.592,41), general procedures (US$22.631,91) and diagnostics and special therapies (US$32.905,98).

Antibiotics accounted for 50.72% of drug costs, especially beta-lactams, which accounted for 54.69% of these costs and 57.87% of total use. Vein and artery Dopplers accounted for more than half of the costs of exams, wound cleaning kits accounted for 39.77% of the costs of materials and the infusion of red blood cell concentration accounted for almost half of the costs of diagnostic procedures and special therapies.

FIGURE 1: TOTAL AND AVERAGE COST PER PATIENT OF HOSPITALIZATIONS FOR CELLULITIS AND ERYSIPELAS, IN 3 YEARS

US$ 815.893,34
TOTAL COST OF HOSPITALIZATIONS
**With an average of US$3.547,36 per patient*

FIGURE 2: DISTRIBUTION OF THE NUMBER OF PATIENTS HOSPITALIZED FOR CELLULITIS AND ERYSIPELAS IN DIFFERENT AGE GROUPS

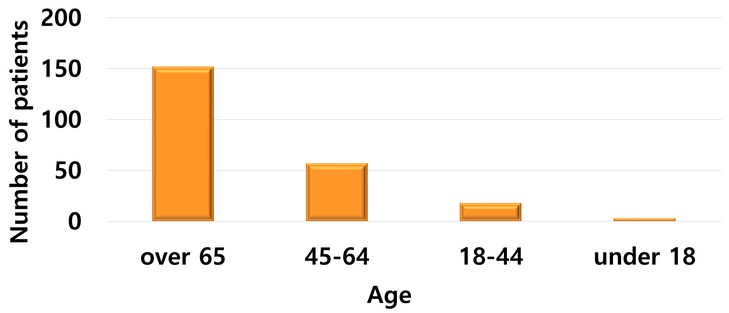


FIGURE 3: DISTRIBUTION OF HOSPITAL COSTS BY CATEGORY

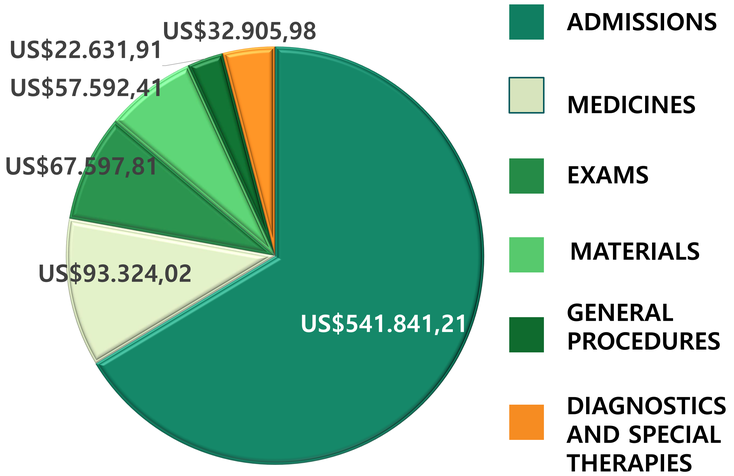
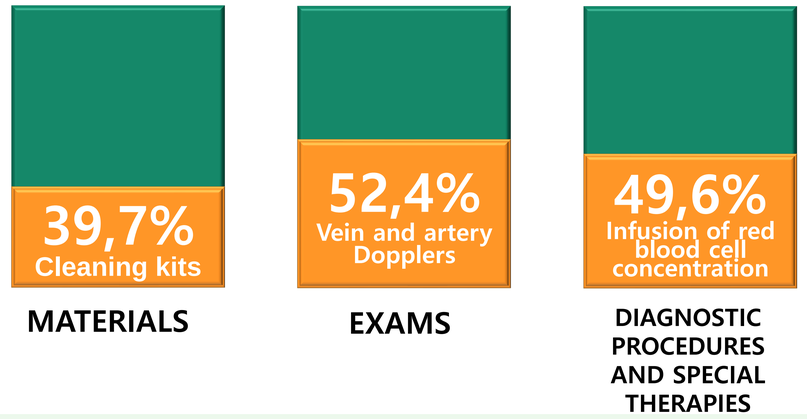


TABLE 1: USE OF DIFFERENT CLASSES OF ANTIBIOTICS BETWEEN 12/2021 AND 11/2024

CLASS OF ANTIBIOTICS	NUMBER OF DOSES IN 3 YEARS	PERCENTAGE RELATED TO TOTAL COST
β-lactams	8.157	**54,69%**
Lipoglycopeptides	1.094	**39,11%**
Lincosamide	2.589	**4,87%**
Sulfonamide, Fluoroquinolone, Nitroimidazoles, Polypeptide and Macrolide	2.133	**1,33%**

FIGURE 4: PERCENTAGE OF MAIN COSTS FOR MATERIALS, EXAMS AND SPECIAL DIAGNOSES/THERAPIES BETWEEN 12/2021 AND 11/2024



CONCLUSION

Hospitalizations for cellulitis and erysipelas had a significant impact on costs, with a predominance in elderly patients. The results emphasize the need for preventive measures, including the adoption of new technologies related to antimicrobial therapy, early management to optimize resources and improve clinical outcomes.

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