



CUTANEOUS BACTERIAL INFECTION- DETAILED INSIGHT

Dermatology

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ABSTRACT

BACKGROUND: Skin and Soft-tissue infections vary widely in their nature and severity. An early diagnosis of infection and its causative etiology are essential to successful treatment. **OBJECTIVE:** Analyze percentage of various bacterial infections in patients presenting in dermatology OPD. **MATERIALS AND METHODS:** A retrospective study based on 100 patients presenting with skin & soft-tissue infections (SSTI) was done. All the cases of skin & soft-tissue infections were considered irrespective of age, sex, etiological factors, or systemic disorders. The findings were evaluated regarding the pattern of skin & soft-tissue infections in relation to age and sex, clinical presentation and predisposing conditions. **RESULTS:** The most commonly involved age group was in the range of 20–40 years with male predominance. Furuncle (22%) was the most common clinical presentation. Type 2 diabetes mellitus was the most common associated comorbid condition. **CONCLUSION:** Skin and soft-tissue infections are among the most common infections encountered by the emergency physicians. Ignorance, reluctance to treatment, economic constraints, and illiteracy delay the early detection and the initiation of proper treatment. Adequate and timely surgical intervention in most of the cases is of utmost importance to prevent the complications and reduce the mortality.

KEYWORDS

Clinical, Etiology, Outcomes, Soft-tissue Infections

INTRODUCTION

The prevalence of cutaneous bacterial infection varies from country to country. The pattern of skin disease is a consequence of poverty, malnutrition, overcrowding, poor hygiene, illiteracy and social backwardness in many parts of India.⁽¹⁾ Skin infections vary from country to country and within the same country, from one state to another, due to various climate, culture and socioeconomic factors and in the dermatological practice. The major skin infectious diseases are impetigo, Staph infections, cellulitis etc. In case of ignorance these infections can spread from skin to blood stream.⁽²⁾ The minimum diagnostic criteria are erythema, edema, warmth, and pain or tenderness.⁽³⁾

In this study, we attempt to evaluate all the clinical conditions associated with skin and soft-tissue infections including the predisposing factors as well as the coexisting morbidities.

AIM AND OBJECTIVES

To evaluate the clinical patterns of Skin and soft-tissue infections including the incidence, presentation, etiological factors, and comorbid conditions

MATERIAL AND METHODOLOGY

Retrospective analysis of 100 patients presenting with bacterial infection in an outpatient Department of Dermatology at tertiary care center was done. Leprosy patients were excluded from the study. The diagnosis was made, based on detailed clinical history, general, systemic and cutaneous examination. Records of relevant investigations were analyzed. The findings were recorded in proforma for analysis and data was interpreted to assess prevalence of various bacterial infections.

Inclusion criteria

1. All cases of soft-tissue infection were considered irrespective of age and both sexes
2. All cases of soft-tissue infection of any etiological factor
3. Any systemic disorder.

Exclusion criteria

Leprosy Patients

RESULT

The present study was conducted in the Department of Dermatology at tertiary care center. A total of 100 patients with diagnosis of skin and soft-tissue infection were analyzed during our study retrospectively.

Age and sex distribution

In the present study, the most common age group involved in cases of

skin & soft-tissue infections was in the range of 20–40 years (52%) followed by age group of <20 years (26%), followed by age group of 40–60 years (16%) and the least commonly involved age group was >60 years (6%). The minimum age encountered was 6 months and the maximum age was 78 years. In our study, skin & soft-tissue infections were seen more frequently in males with male to female ratio of 1.17:1. Age and sex distribution are given in [Table 1].

Table 1

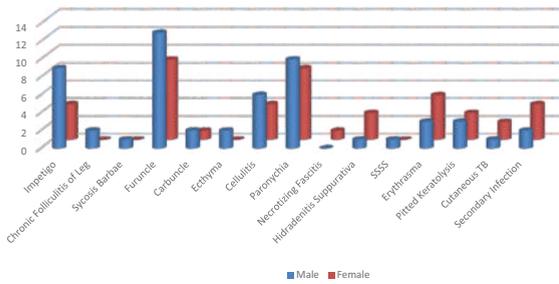
Age-Group	Male	Female	Total
<20 Years	17	9	26
20-40 Years	29	23	52
40-60 Years	6	10	16
>60 Years	2	4	6
Total	54	46	100

Clinical presentation

In this study, the most common bacterial infection was Furuncle in 22 patients, followed by paronychia in 18 patients and impetigo in 13 patients. 3 patients were of cutaneous TB and there were 1 patient each of sycosis barbae, necrotizing fasciitis and staphylococcos scalded syndrome. The pattern of cutaneous infections is shown in [Table 2].

Table 2

Bacterial Infections	Frequency		Total
	Male	Female	
Impetigo	9	4	13
Chronic Folliculitis of Leg	2	0	2
Sycosis Barbae	1	0	1
Furuncle	13	9	22
Carbuncle	2	1	3
Ecthyma	2	0	2
Cellulitis	6	4	10
Paronychia	10	8	18
Necrotizing Fasciitis	0	1	1
Hidradenitis suppurativa	1	3	4
Staphylococcal Scalded Skin Syndrome (SSSS)	1	0	1
Erythrasma	3	5	8
Pitted Keratolysis	3	3	6
Cutaneous TB	1	2	3
Secondary infection in other skin diseases like scabies, pemphigus	2	4	6
Total	56	44	100



Predisposing Condition

Diabetes was most common factor predisposing to bacterial infection followed by immunosuppression due to oral corticosteroid and HIV infection.(Table 3)

Table 3

Predisposing Factors	Frequency
Diabetes Mellitus	31
Corticosteroid Therapy	11
HIV infection	7
No Comorbid Condition	51
Total	100

DISCUSSION

The present study was conducted at tertiary care hospital. A total of 100 patients with diagnosis of skin & soft-tissue infection were analyzed in our study retrospectively.

The most common age group involved in skin & soft-tissue infections was in the range of 20–40 years (52%) and least involved was the age group >60 years (6%). In our study, skin & soft-tissue infections were seen more frequently in males (m:f = 1.17:1). These findings are corresponding to previous similar studies by Lipsky *et al.*⁽⁴⁾ and Ki and Rotstein⁽⁵⁾ that the skin & soft-tissue infections are common in adult males.

Furuncle (22%) was most common clinical presentation of skin & soft-tissue infections. In a similar study, Ellis Simonsen *et al.*⁽⁶⁾ concluded that abscess formation was common occurrence in cases of skin and soft-tissue infections (SSTIs) attributable to the late presentation of such cases to the clinician.

In the present study, 49% cases were associated with comorbid conditions. Out of these, type 2 diabetes mellitus (32%) was the most common associated comorbid condition. Our study agrees with the study of Shen and Lu⁽⁷⁾ in which the authors concluded that diabetes mellitus was the most common comorbid condition associated with soft-tissue infections. (45%) was most common clinical presentation of soft-tissue infections.

CONCLUSION

SSTIs are among the most common infections encountered by dermatology. The knowledge about type of infection, causative organism, and the associated comorbid conditions is important for the timely management of such patients.

Mortality in the cases of soft-tissue infections depends on various factors such as age, extent of infection, delay in first debridement, impaired renal function, and degree of organ system dysfunction at the time of admission. Furthermore, there are few other factors such as demographic variations, illiteracy, economic constraints, and the lack of tertiary care facilities which hinder the reduction in mortality rates.

The present study was done to find out all these aspects related to skin & soft-tissue infections in a setup of developing country.

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Cutaneous TB:



Staphylococcal Scalded Skin Syndrome:



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