

Introduction

Sepsis remains a significant cause of morbidity and mortality in low-resource settings, particularly in sub-Saharan Africa. Timely diagnosis and management of sepsis are challenging due to limited healthcare resources, contributing to high mortality rates.

Cutaneous manifestations in sepsis are commonly observed but are often underreported, especially in regions with limited access to dermatological expertise. HIV infection further complicates the clinical presentation of sepsis, as it predisposes individuals to a wide range of skin abnormalities, ranging from opportunistic infections to malignancies like Kaposi sarcoma.

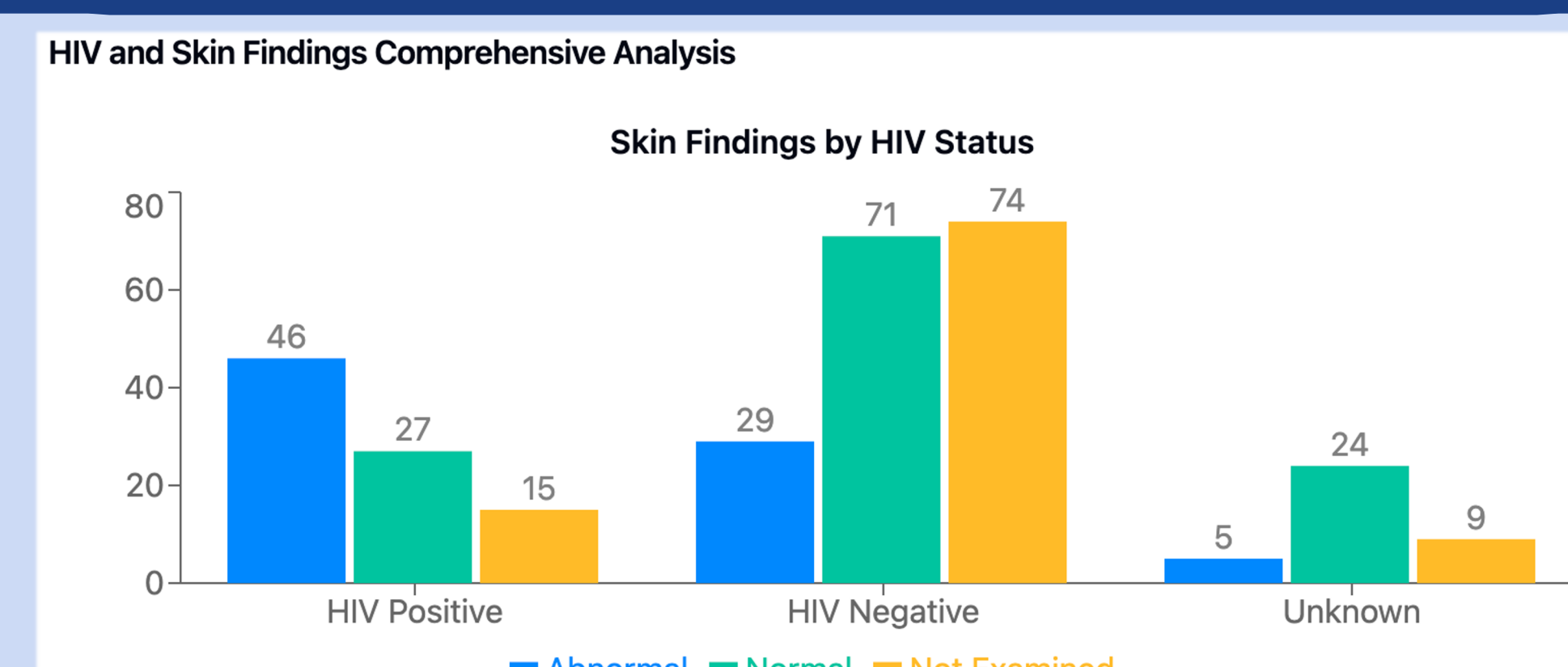
The immunocompromised state associated with HIV increases the susceptibility to various cutaneous conditions, which can serve as early markers for HIV-related complications. However, the specific relationship between sepsis, skin abnormalities, and HIV status has not been extensively studied in African populations.

This study aims to address this gap by investigating the prevalence and types of skin abnormalities in adults with sepsis, with a focus on their HIV serostatus, in Mbarara, Uganda.

Methods

- **Study Design:** Retrospective study (2019-2023)
- **Population:** Adults admitted with sepsis at Mbarara Hospital
- **Inclusion Criteria:** Patients with ≥ 2 qSOFA criteria and suspected infection
- **Data Collection:** Skin examination results were recorded systematically from patient records and categorized based on HIV serostatus. This included both specific diagnoses, such as Kaposi sarcoma, and nonspecific skin lesions.
- **Data Analysis:** SPSS was used for analysis and R for visualization

Results



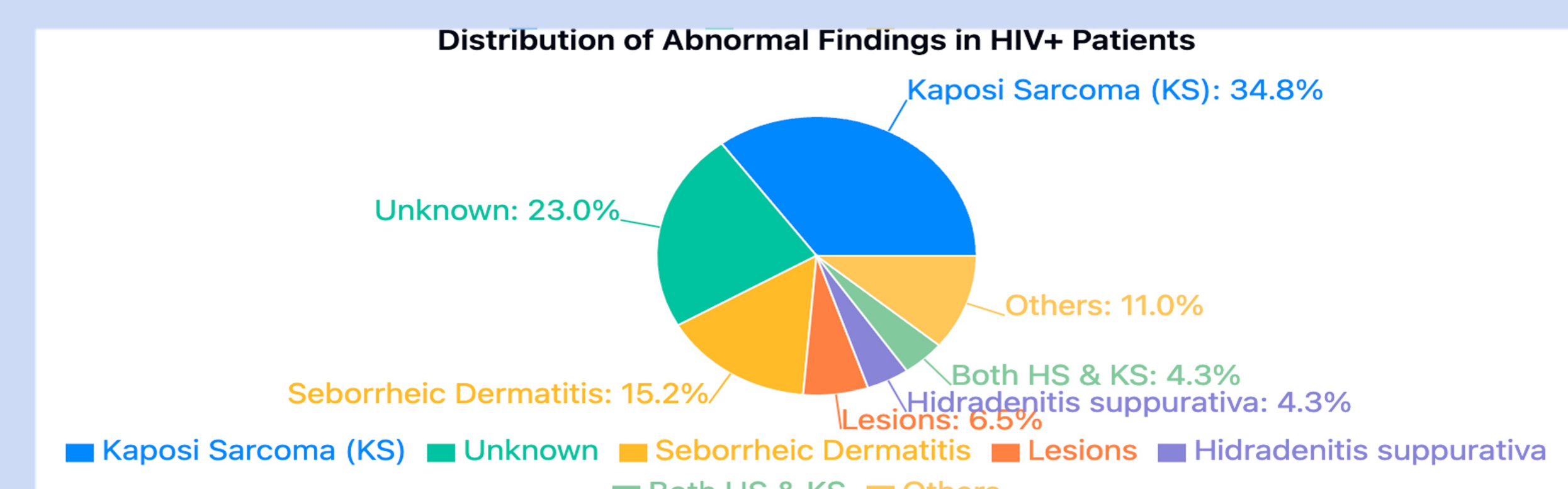
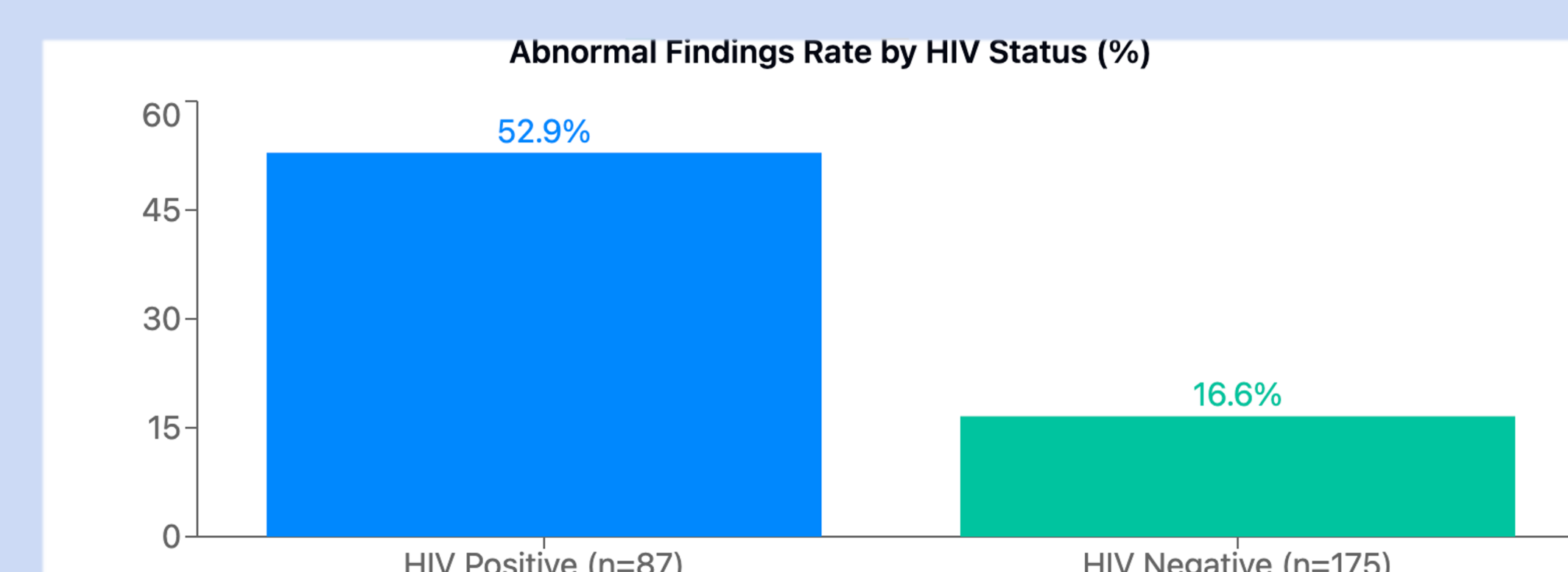
HIV Positive:

- 46 with abnormal findings
- 27 with normal findings
- 15 not examined

HIV Negative:

- 29 with abnormal findings
- 71 with normal findings
- 74 not examined

Results



Skin Findings Stratified by HIV Serostatus

HIV Positive (87 patients):

- Kaposi Sarcoma (KS): 34.8%
- Unknown Findings: 23%
- Seborrheic Dermatitis: 15.2%
- Other Findings: 11%
- Non-Specific Lesions: 6.9%
- Hidradenitis Suppurativa: 4.3%
- Both HS & KS: 4.3%

Association Between HIV and Skin Abnormalities:

- Odds Ratio: 5.87 (95% CI 3.36-10.27, $p < 0.001$)

Discussion

HIV-positive individuals were found to have a markedly higher prevalence of skin abnormalities, including Kaposi sarcoma and seborrheic dermatitis, compared to their HIV-negative counterparts. These results underscore the need for routine dermatologic assessments in HIV-positive patients who present with sepsis, particularly in low-resource settings where HIV testing may not always be performed.

The high prevalence of Kaposi sarcoma among HIV-positive sepsis patients suggests that specific cutaneous manifestations may serve as early diagnostic tools in identifying HIV in sepsis patients. This is particularly valuable in settings like Mbarara Hospital, where access to comprehensive HIV testing can be limited. Implementing routine skin checks as part of sepsis management could serve as an efficient and cost-effective approach to identify individuals at higher risk of HIV, thereby optimizing the allocation of scarce testing resources.

Future research should focus on prospective studies to determine the long-term benefits of incorporating dermatologic evaluations into sepsis care. Such studies could help establish the role of skin abnormalities as a reliable marker for prioritizing HIV testing in sepsis patients, ultimately aiding in better clinical outcomes and resource management.

Conclusion

Skin abnormalities are common in sepsis patients in Uganda. This study highlights the need to integrate skin checks into sepsis management, particularly in regions with limited healthcare resources. The association between HIV and skin conditions like Kaposi sarcoma and seborrheic dermatitis suggests that cutaneous findings could serve as early diagnostic tools. As such, routine HIV testing may not be feasible due to financial and logistical barriers. Future research should focus on prospective studies to validate these findings and explore systematic integration of dermatologic evaluations into sepsis protocols to optimize patient care in resource-limited settings.

Acknowledgements

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