

Assessment of Schistosomiasis Management at Healthcare Facilities in Kigoma, Tanzania

Abstract

Background: Schistosomiasis remains a major public health problem in Tanzania, particularly in Kigoma Region, where frequent water contact activities promote transmission. Effective management at healthcare facilities is critical for disease control and elimination efforts. Objective: To assess schistosomiasis management practices at healthcare facilities in Kigoma, Tanzania, with emphasis on diagnostic capacity, treatment availability, and implementation challenges.

Methods: A cross-sectional descriptive study was conducted between March and June 2024 among 47 healthcare workers from 11 healthcare facilities in Kigoma Region. Structured questionnaires were administered to doctors, pharmacists, nurses, and medical laboratory personnel. Data were analyzed using descriptive statistics.

Results: Most healthcare workers reported being very familiar with schistosomiasis, including 69.2% of doctors, 63.6% of pharmacists, 53.8% of nurses, and 60% of medical laboratory personnel. Praziquantel was identified as the treatment of choice by 84.6% of doctors. Key challenges included medication stock-outs (45.5% of pharmacists), patient education and treatment adherence issues (69.2% of nurses), and inadequate diagnostic equipment or reagents (30% of laboratory personnel). More than 80% of healthcare workers reported no access to in-service training on schistosomiasis management.

Conclusion: Although healthcare workers demonstrated moderate to good knowledge of schistosomiasis, effective management was constrained by limited diagnostic capacity, inconsistent drug supply, insufficient training, and patient-related challenges. Strengthening healthcare facility capacity through improved resource allocation, continuous professional development, and integrated management approaches is essential for effective schistosomiasis control

Keywords: Schistosomiasis; Healthcare management; Kigoma; Tanzania; Diagnosis; Treatment barriers

Introduction

Schistosomiasis is one of the most important neglected tropical diseases worldwide, affecting more than 240 million people, with approximately 90% of cases occurring

Research Article

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in sub-Saharan Africa [1]. In Tanzania, the disease remains endemic, particularly in Kigoma Region, where proximity to Lake Tanganyika and frequent water contact activities increase the risk of transmission [2].

The disease is caused by parasitic trematodes of the genus *Schistosoma*, with *Schistosoma mansoni* and *Schistosoma haematobium* being the predominant species in Tanzania. Infection results in significant morbidity, including hepatosplenomegaly, urogenital complications, and long-term sequelae such as liver fibrosis and bladder cancer [3].

Effective management of schistosomiasis at healthcare facility level is essential for both individual patient outcomes and broader public health control. The World Health Organization recommends accurate diagnosis, timely treatment with praziquantel, and integrated control strategies as key components of schistosomiasis management [4].

Despite these guidelines, gaps persist in the implementation of schistosomiasis management practices, particularly in resource-limited settings. Common challenges include inadequate diagnostic capacity, inconsistent availability of praziquantel, and limited healthcare worker training [5].

This study assessed schistosomiasis management practices at healthcare facilities in Kigoma, Tanzania, focusing on diagnostic methods, treatment availability, and barriers to effective implementation.

Materials and Methods

Study design and setting

A cross-sectional descriptive study was conducted from March to June 2024 in Kigoma Region, Tanzania. The region was selected due to its endemicity for schistosomiasis and proximity to Lake Tanganyika.

Study population

The study population comprised healthcare workers involved in schistosomiasis diagnosis, treatment, or management, including doctors, pharmacists, nurses, and medical laboratory personnel.

Sample size and sampling

A total of 47 healthcare workers were recruited from 11 healthcare facilities in Kigoma Region. Purposive sampling was used to ensure representation across all professional categories.

Data collection

Data were collected using structured questionnaires tailored to each professional group. Information captured included demographic characteristics, familiarity with schistosomiasis, diagnostic and treatment practices, availability of resources, training opportunities, and challenges in disease management.

Data analysis

Data were analyzed using descriptive statistics. Categorical variables were summarized using frequencies and percentages.

Ethical Considerations

Ethical approval was obtained from relevant authorities. Written informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were strictly maintained.

Results

Response rate

All 47 healthcare workers completed the questionnaires, yielding a response rate of 100%.

Demographic characteristics

The participants included 13 doctors (27.7%), 11 pharmacists (23.4%), 13 nurses (27.7%), and 10 medical laboratory personnel (21.3%). Most participants across all professional categories were aged 30–39 years.

Familiarity with schistosomiasis

Overall familiarity with schistosomiasis was high. A majority of doctors (69.2%), pharmacists (63.6%), nurses (53.8%), and laboratory personnel (60%) reported being very familiar with the disease and its management.

Diagnostic and treatment practices

Most laboratory personnel (80%) were aware of nationally recommended diagnostic methods for schistosomiasis; however, diagnostic capacity was limited by inadequate equipment and reagents. Praziquantel was reported as the standard treatment by 84.6% of doctors.

Challenges in management

Key challenges included medication stock-outs reported by pharmacists (45.5%), patient education and treatment adherence issues reported by nurses (69.2%), and lack of diagnostic equipment reported by laboratory staff (30%).

Training and collaboration

More than 80% of pharmacists, nurses, and laboratory personnel reported having no access to specific training programs on schistosomiasis management. Interprofessional collaboration was limited across facilities.

Discussion

The findings demonstrate that healthcare workers in Kigoma possess moderate to good knowledge of schistosomiasis; however, effective management is constrained by systemic and resource-related barriers. Limited diagnostic capacity, inconsistent praziquantel supply, inadequate training opportunities, and patient adherence challenges were the most prominent issues.

These findings are consistent with reports from other schistosomiasis-endemic settings in sub-Saharan Africa.

Conclusion

Schistosomiasis management at healthcare facilities in Kigoma is limited by gaps in diagnostic capacity, medication availability, training, and patient education. Addressing these challenges through targeted investments, continuous professional development, and integrated healthcare approaches is essential for strengthening schistosomiasis control and elimination efforts in Tanzania.

Recommendations

1. Strengthen diagnostic infrastructure at primary healthcare facilities.
2. Improve supply chain systems to ensure consistent availability of praziquantel.
3. Implement regular training programs for healthcare workers.
4. Enhance patient education and community engagement initiatives.

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5. Promote interprofessional collaboration and integration of schistosomiasis services.

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Author Contributions

PJN: Conceptualization, data collection, analysis, and manuscript writing.

FL: Supervision, methodological review, and manuscript revision.

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Conflicts of Interest

The authors declare no conflicts of interest.

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