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PREVALENCE AND DETERMINANTS OF MATERNAL SYPHILIS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINICS IN AL-NUHOD LOCALITY, SUDAN

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ABSTRACT

Background: *Maternal syphilis remains under-recognized in Sudan despite its contribution to poor pregnancy outcomes. Local prevalence data are needed to inform targeted interventions.*

Objective: *To determine the prevalence of syphilis and associated demographic and clinical characteristics among pregnant women in Al-Nuhod locality, Sudan.*

Methods: *A descriptive cross-sectional study was conducted among 400 pregnant women from 2018–2021. Syphilis testing was performed using rapid plasma reagin (RPR). Demographic and clinical characteristics, including age, education, marital status, reproductive history, and ANC attendance, were recorded using structured questionnaires.*

Results: *The overall prevalence of syphilis was 0.75%. Women with a history of abortion (38%), premature birth (30%), multiple sexual partners, or previous STIs were more likely to test positive*
. Lower education and delayed antenatal care initiation were significantly associated with syphilis positivity.

Conclusion: *While prevalence in Al-Nuhod locality was lower than other settings in Sudan, key risk factors persist. Early ANC attendance, routine screening, and targeted health education remain critical to reducing infection.*

KEYWORDS: *Maternal Syphilis, Prevalence, Antenatal Care, Sudan, Pregnancy Outcomes*

INTRODUCTION

Maternal syphilis is a major preventable cause of stillbirth, neonatal mortality, and congenital infection. Global elimination strategies focus on universal screening and treatment during pregnancy. Despite these efforts, many countries including Sudan lack updated prevalence data.

Studies in Sudan have shown inconsistent prevalence rates ranging from 0.5% to 7.4% depending on region and study population [1,2]. This study investigates the prevalence and associated determinants of syphilis among pregnant women in Al-Nuhod, West Kordofan.

METHODS

Study Design and Participants

Cross-sectional study involving 400 pregnant women attending ANC clinics in Al-Nuhod locality between January 2018 and December 2021.

Data Collection

- Structured questionnaire and interview
- Sociodemographic data, sexual behavior, reproductive history
- Syphilis screening using RPR

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Statistical Analysis
Data processed using SPSS v22. Prevalence rates and associations between syphilis and clinical/demographic factors were analyzed with chi-square tests.

RESULTS

Prevalence
Syphilis prevalence was **0.75%** based on RPR testing.

Risk Characteristics of Positive Cases

- 38% had a history of abortion
- 30% had premature deliveries
- 55% reported multiple sexual partners
- 67% reported previous STI history
- Most were uneducated or had only primary schooling

DISCUSSION

The syphilis prevalence in Al-Nuhod locality was low compared to other regions of Sudan such as El Obeid (7.43%) and Khartoum (2.4%) [1,2], but consistent with lower rates recorded in southern Brazil (0.9%) and Chile (0.4%) [3].
The association between syphilis and past abortion/premature birth is consistent with findings from Ethiopia, Uganda, and DR Congo, confirming that untreated syphilis contributes to adverse pregnancy outcomes [4–6].
Even at low prevalence, the potential for congenital syphilis necessitates universal screening and early ANC attendance.

CONCLUSION

Maternal syphilis remains present in Al-Nuhod locality and associated with preventable adverse pregnancy outcomes. Scale-up of community-based education and mandatory ANC screening is recommended.

RECOMMENDATIONS

1. Expand free screening services in all ANC facilities.
2. Implement awareness campaigns targeting high-risk women.
3. Improve early ANC registration through community outreach.
4. Integrate syphilis testing into routine maternal health programs.

REFERENCES (VANCOUVER)

1. *Elkheir SM, et al. Maternal syphilis in North Kordofan. Int J STD AIDS. 2018;29(13):1330–6.*
2. *Ali AAA, et al. Sero-prevalence of syphilis in Khartoum maternity hospitals. Sudan J Med Sci. 2014;9(2):45–52.*
3. *Fica A et al. Resurgence of syphilis among pregnant women in southern Chile. Rev Med Chil. 2021;149(6):897–905.*
4. *Tareke K, Munshea A, et al. Syphilis and pregnancy outcomes in Ethiopia. BMC Res Notes. 2019;12(1):69.*
5. *Simiyu A, et al. Syphilis prevalence in Kampala. Pan Afr Med J. 2024;47:129.*
6. *Kayembe PK et al. Maternal syphilis and pregnancy outcomes in Congo. Sex Transm Dis. 2019;46(4):272–9.*