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ANTIBIOTIC USE AND VAGINAL DISCHARGE SYNDROME BY HIV STATUS IN PREGNANCY, BOTSWANA

Modiegi D. Diseko[1], Sonya Davey[2], Rebecca Zash[3], Judith Mabuta[1], Gloria K. Mayondi[1], Shahin Lockman[4], Rebecca Luckett[3], Chelsea Morroni[5], Mompati O. Mmalane[1], Joseph Makhema[1], Goabaone Mogomotsi[6], Eldah N. Dintwa[6], Tumalano Sekoto[1], Ngozana Seonyatseng[1], Roger L. Shapiro[7]

Affiliations:[1] Botswana Harvard AIDS Institute Partnership, Gaborone, Botswana; [2]Goodtables Consulting, 3101 Tisbury Rd, Norman, OK 73071; [3]Botswana Ministry of Health, Gaborone, Botswana; [4]Harvard T.H. Chan School of Public Health, Department of Immunology and Infectious Diseases, Boston, United States; [5]Division of Infectious Diseases, Beth Israel Deaconess Medical Center, Boston, MA, United States [6]Boston Children's Hospital, Boston, MA, United States, [7]Brigham and Women's Hospital, Boston, MA, United States

Background

- Vaginal discharge syndrome (VDS), a clinical diagnosis which includes non-specific vaginal discharge and sexually transmitted infections (STIs), is common among pregnant women in Botswana
- We set out to determine whether VDS prevalence or antibiotic treatment differed by maternal HIV status, CD4 cell count, and antiretroviral treatment (ART) use in pregnant women

Methods

- We abstracted pregnancy management data from obstetric records for all women who delivered at 8 government hospitals in Botswana as part of the Tsepamo Study
- Data included maternal demographics, all diagnoses made during pregnancy (including VDS and specific STIs, when available), antibiotic treatment prescribed, and maternal HIV status, CD4 count and ART regimen (with start date)





Results

- From Aug 2014 to May 2018, 91383 women delivered at the 8 surveillance sites and 91313 (99.9%) had information on maternal diagnoses in pregnancy
- VDS was the most common diagnosis among all pregnant women, occurring in 28296 (**31.0%**) of all pregnancies

Table 1: Maternal Characteristics by VDS status

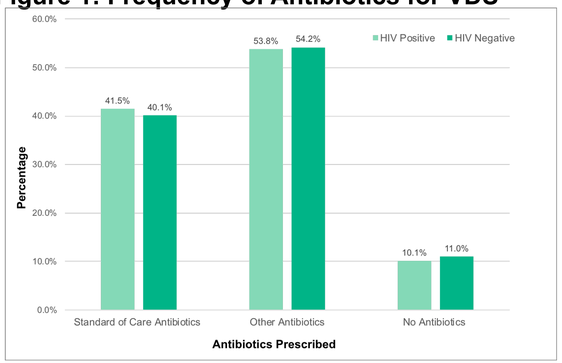
Characteristics of women by VDS status in pregnancy	VDS (N=28,294)	No VDS (N=63,017)
Maternal age, yrs, (median, IQR)	**25 [21,31]**	**26 [22,32]**
Primary or none **Secondary education/** **Tertiary education**	**6.0%** **94.0%**	**8.5%** **91.5%**
Married	**9.5%**	**11.9%**
Citizen of Botswana	**98.1%**	**96.1%**
Salaried Employee **Non-salaried** **Student**	**36.5%** **54.9%** **8.5%**	**34.4%** **58.5%** **7.0%**
Primigravida **Gravida 2-4** **Gravida ≥5**	**39.3%** **52.6%** **8.1%**	**34.4%** **54.0%** **11.6%**
Received Antibiotics during pregnancy	**90.5%**	**16.2%**
HIV infected	**31.7%**	**31.0%**

Table 2: VDS by HIV and ART status

	VDS	No VDS
HIV uninfected (N=68046)	**31.0%**	**69.0%**
HIV infected (N=22,568)	**31.7%**	**68.3%**
ART at conception (N=12,144)	**28.7%**	**71.3%**
ART started in pregnancy (N=8,455)	**37.8%**	**62.2%**
No ART (N=1,577)	**23.3%**	**76.7%**
CD4 <350 (N=1,625)	**37.4%**	**62.6%**
CD4 >350 (N=4,029)	**34.2%**	**65.8%**

- 43% of HIV-infected vs. 39% of HIV-uninfected received antibiotics in pregnancy (p <.0001)
- VDS diagnoses similar among HIV-infected and HIV-uninfected women (31.7% vs. 31.0%, p=0.04)
- VDS slightly more common among those with < 350 CD4 cells/mm^3 vs. those with higher CD4 cell counts (37.4% vs. 34.2%, p=0.02)
- Among HIV-infected women, those who initiated ART prior to conception had less VDS than those initiating ART during pregnancy (28.7% vs. 37.8%, p<.0001)

Figure 1: Frequency of Antibiotics for VDS



***Standard of Care Antibiotics for VDS = Ceftriaxone, Metronidazole, and Azithromycin/Erythromycin**

- **Antibiotics prescribed in 40% of all pregnancies, including 91% of women with VDS**

Conclusions

- **Vaginal discharge syndrome common among both HIV-positive and HIV-negative pregnant women in Botswana**
  - Most frequent reason for antibiotic use in pregnancy
- **ART started prior to conception may reduce the prevalence of VDS among HIV-infected women**

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