

Sexually Transmitted Infections in HSV-2 Seropositive women in Sub- Saharan Africa

HPTN 039

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Introduction

- Sexually transmitted infections (STIs) are common causes of morbidity and mortality especially in women in Africa
- In 2012, there were an estimated 357 million new infections of the four curable STIs – chlamydia, gonorrhoea, syphilis and trichomoniasis
 - 63 million new cases in Africa
- STIs cause long-term complications including infertility, still births, spontaneous abortions, ectopic pregnancy and chronic pelvic pain
- STIs also increases the risk of HIV transmission
- Untreated STIs place an increased strain on public healthcare systems, particularly in resource-poor countries

Syndromic Management

- Syndromic management of STIs has been adopted by countries in Africa to treat STIs per WHO recommendation
- The advantages are:
 - It does not delay treatment of STIs
 - It does not require specialist centre referral
 - More cost effective
- The disadvantages are:
 - Inability to detect asymptomatic STIs
 - It over-treats women with vaginal discharge and their partners and this can lead to psychological and social consequences
 - It also increases medication costs and has potential for increased drug resistance and side effects

Purpose

- To examine any potential risk factors that predispose women to STI acquisition
- To examine the effectiveness of SM in the treatment of STIs amongst women

Methods

- Enrolled HIV-1 negative, HSV-2 seropositive women (N=1358) from sites in SSA
- All participants received a comprehensive HIV prevention package consisting of HIV/STI pre- and post test counselling, intensive risk reduction counselling, free condoms, treatment of curable, laboratory-diagnosed STIs and SM according to WHO guidelines
- A secondary data analysis was conducted with clinical, behavioral and laboratory STI information collected at baseline

Demographic and Behavioural History

	Zimbabwe	Zambia	South Africa	Total
Total Appropriately Enrolled	364	602	392	1358
Age (years)				
Median	30	31	30	31
Marital status				
Married	351/364 (96%)	539/602 (90%)	106/392 (27%)	996/1358 (73%)
Not married	13/364 (4%)	63/602 (10%)	286/392 (73%)	362/1358 (27%)
Lives with				
Male Partner	340/364 (93%)	528/602 (88%)	205/392 (52%)	1073/1358 (79%)
Other	24/364 (4%)	74/602 (12%)	187/392 (47%)	232/1358 (21%)
Behavioural History				
Number of sex acts with most recent partner in past 3 months				
Median	36	21	20	24
Unprotected sex with most recent partner in last 3 month	338/364 (93%)	523/602 (87%)	356/392 (91%)	1217/1358 (90%)
Number of sexual partners in past 12 months				
1	354/364 (97%)	571/602 (95%)	264/392 (67%)	1189/1358 (88%)
Relationship >1 year before sex intercourse	160/364 (44%)	77/602 (13%)	28/392 (7%)	265/1358 (20%)
Alcohol used before sex	3/364 (1%)	8/602 (1%)	17/392 (4%)	28/1358 (2%)
Paid for sex with most recent partner	2/364 (1%)	13/602 (2%)	2/392 (1%)	17/1358 (1%)

Past STI History

	Zimbabwe	Zambia	South Africa	Total
Reported STI symptoms in past 3 months				
Abnormal vaginal discharge	38/364 (10%)	62/602 (10%)	91/392 (23%)	191/1358 (14%)
Lower abdominal pain	32/364 (9%)	102/602 (17%)	35/392 (9%)	169/1358 (12%)
Anogenital sores	117/364 (32%)	192/602 (32%)	104/392 (27%)	413/1358 (30%)
Diagnosed with an STI	21/364 (6%)	23/602 (4%)	44/392 (11%)	88/1358 (6%)

Recent STI History and Diagnosis

	Zimbabwe	Zambia	South Africa	Total
Reported STI symptoms in past 7 days				
Abnormal vaginal discharge	32/364 (9%)	43/602 (7%)	103/392 (26%)	178/1358 (13%)
Lower abdominal pain	27/364 (7%)	60/602 (10%)	18/392 (5%)	105/1358 (8%)
Anogenital sores	53/364 (15%)	85/602 (14%)	42/392 (11%)	180/1358 (13%)
Laboratory diagnosed STI				
Syphilis	6/364 (2%)	45/602 (7%)	4/392 (1%)	55/1358 (4%)
BV	127/364 (35%)	238/602 (40%)	170/392 (43%)	535/1358 (39%)
TV	27/364 (7%)	71/602 (12%)	30/392 (8%)	128/1358 (9%)
CT	17/364 (5%)	50/602 (8%)	14/392 (4%)	81/1358 (6%)
GC	4/364 (1%)	2/602 (<1%)	5/392 (1%)	11/1358 (1%)
HSV-2+ GUD	16/364 (4%)	13/602 (2%)	16/392 (4%)	45/1358 (3%)

Vaginal Discharge Syndrome(VDS)

- Abnormal vaginal discharge in sexually active woman
- Syndromic Management of VDS
 - Azithromycin 1 g (CT/GC)
 - Ceftriaxone 250mg(GC)
 - Metronidazole 2 g (TV/BV)
- Of the 178 woman who reported abnormal vaginal discharge in the previous 7 days, laboratory diagnosis confirmed:
 - 49% - BV
 - 10% - Trichomonas Vaginalis
 - 5% - Chlamydia
 - 1% - Gonorrhoea

Vaginal Discharge Syndrome

	CT/GC/TV/BV confirmed	CT/GC/TV/BV not confirmed	Total
VDS present	116	62 (over-treated cases)	178
No VDS present	639 (missed cases)	541	1180
Total	755	603	1358

- 65 % of those who presented with vaginal discharge would be correctly treated for CT, GC, TV or BV
- 35% of those with VDS would be ‘over-treated’
- 15% of those with confirmed CT/GC/TV/BV and VDS would be treated
- 85% of those with confirmed CT/GC/TV/BV would be considered ‘missed cases’ if SM was used

Summary

- Syndromic management of STIs is more likely to miss or over-treat woman with abnormal vaginal discharge
- Based on this study, further research needs to be conducted to investigate other possible methods that could facilitate the prompt and effective diagnosis and treatment of STIs in the SSA context
 - Point-Of-Care Diagnostic Tests for STIs
 - Development of new drugs to combat drug resistance
- No behavioural or demographic factors were associated with increased risk of STI acquisition

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