

Can vaginal pH and *Trichomonas vaginalis* POCT be used as a means of reducing vaginal microscopy in women with vaginal discharge?

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Background: Microscopy is widely used to diagnose the causes of discharge, but is time consuming and may not be available for all circumstances. We looked to build an algorithm for managing vaginal discharge based on symptoms, vaginal pH and TV POCT only.

Methods: A retrospective study of women who presented to the clinic between May 2017 and December 2017 with vaginal discharge. In addition to microscopy, vaginal pH was taken and a TV POCT performed for pH >4.5. Data was collected on symptoms, vaginal pH, TV POCT result and microscopy

Results: In women for whom results were adequately recorded, the TV prevalence was 14% (77/564 women) at pH of ≥ 4.5 and 0% (0/64 women) in women with a pH of <4.5

Table: Symptoms and diagnosis of 386 women who were TV negative in one or both tests and had a vaginal pH

	Diagnosis	Number	Symptoms			
			Itch	Smell	Neither	Both
pH<4.5 (64 women)	Nil	32 (50%)	11	4	16	1
	BV+ Thrush	2 (3%)	1	1	0	0
	Thrush	27 (42%)	14	3	7	3
	BV	3 (5%)	0	2	0	1
pH\geq4.5 (322 women)	Nil	90 (28%)	20	25	35	8
	BV+ Thrush	27 (8%)	3	9	9	5
	BV	184 (57%)	25	85	49	21
	Thrush	21 (6.5%)	12	0	6	3

In women with vaginal discharge who were TV negative with a vaginal pH of ≥ 4.5 , the majority (65%) had BV whilst in women with a pH of <4.5 the most likely diagnoses were thrush (45%) or no microbiological diagnosis (50%). Symptoms of smell (46% of BV) or vaginal itch (52% of Thrush) also correlated with the diagnosis although they were also found in women with no microbiological diagnosis.

Conclusion: Vaginal pH testing allied with TV POCT is a quick and cheap method to diagnose women with discharge in a community setting. We found that using a combination of pH, TV POCT and symptoms, appropriate empirical treatment could be constructed. This would be useful for settings in the community where microscopy was not available.