

INTISARI

Latar Belakang: Kandidiasis vulvovaginal adalah salah satu penyebab tersering dari keluhan duh tubuh vagina atau keputihan yang sebagian besar disebabkan oleh *Candida albicans*. Baku emas diagnosis kandidiasis vulvovaginal adalah pemeriksaan kultur, namun ketersediaannya terbatas, biaya yang tinggi, dan hasil pemeriksaan memerlukan waktu beberapa hari. *Point of care test* (POCT) *lateral flow immunochromatographic assay* (LFIA) adalah alat yang dapat mendeteksi antigen *Candida albicans*, namun uji diagnostik alat ini belum pernah dilakukan di Indonesia.

Tujuan: mengukur kemampuan POCT LFIA *Candida albicans* untuk diagnosis kandidiasis vulvovaginal yang disebabkan *Candida albicans* pada wanita dengan keluhan duh tubuh vagina.

Metode: Penelitian observasional potong lintang dengan rancangan uji diagnostik, menggunakan sampel duh tubuh vagina. Penelitian ini mengikutsertakan 31 subjek penelitian yang memenuhi kriteria inklusi dan eksklusi. Sampel duh tubuh vagina dilakukan pemeriksaan POCT LFIA dengan Medomic *Candida albicans/ Trichomonas vaginalis/ Gardnerella vaginalis Antigen Combo Test Kit*® dan pemeriksaan kultur *Candida* spp. Pemeriksaan kultur *Candida* spp., hasil positif jika tumbuh *Candida albicans* lebih dari *limit of detection* (LOD) POCT LFIA yaitu 4×10^4 CFU/ml.

Hasil: Hasil kultur *Candida* spp. dari 31 sampel duh tubuh vagina, didapatkan 14 sampel positif *Candida albicans* dan *non-albicans* (45%). Hasil kultur *Candida albicans* terdapat pada enam sampel, tiga sampel diantaranya dengan jumlah *Candida albicans* kurang dari LOD POCT LFIA *Candida albicans*. Pada analisis uji diagnostik, POCT LFIA *Candida albicans* memiliki sensitivitas 100% (95% CI 29,24% - 100 %), spesifitas 89,29% (95% CI 71,77% - 97,73%), akurasi 90,32% (95% CI 74,25% - 97,96%), LR (+) 9 (95% CI 3,2 - 27,19), LR (-) 0, PPV 50% (95% CI 25,55% - 74,45%), NPV 100% (95% CI 86,28% - 100%) terhadap pemeriksaan kultur *Candida* spp.

Kesimpulan: *Point of care test* LFIA *Candida albicans* dapat digunakan untuk diagnosis kandidiasis vulvovaginal yang disebabkan *Candida albicans* pada wanita dengan keluhan duh tubuh vagina.

Kata Kunci: kandidiasis vulvovaginal, kultur *Candida*, *point of care test*, *lateral flow immunochromatographic assay*

ABSTRACT

Background: Vulvovaginal candidiasis is one of the most common causes of complaints of vaginal discharge, which is mostly caused by *Candida albicans*. The gold standard for diagnosis of vulvovaginal candidiasis is culture examination, however its availability is limited, the cost is high, and examination results take several days. The point of care test (POCT) lateral flow immunochromatographic assay (LFIA) is a tool that can detect *Candida albicans* antigens, but this diagnostic test has never been carried out in Indonesia.

Objective: to know the ability of POCT LFIA *Candida albicans* for the diagnosis of vulvovaginal candidiasis caused by *Candida albicans* in women with complaints of vaginal discharge.

Method: Cross-sectional observational study with a diagnostic test design, using vaginal discharge samples. This study included 31 research subjects who met the inclusion and exclusion criteria. Vaginal discharge samples were subjected to POCT LFIA examination with Medomic *Candida albicans*/ *Trichomonas vaginalis*/ *Gardnerella vaginalis* Antigen Combo Test Kit® and *Candida* spp culture examination. Culture examination of *Candida* spp., positive results if *Candida albicans* grows more than the POCT LFIA limit of detection (LOD), 4x10⁴CFU/ml.

Result: *Candida* spp. culture results from 31 vaginal discharge samples showed that 14 samples were positive for *Candida albicans* and *non-albicans* (45%). Culture results with *Candida albicans* were found in 6 samples, three of which had *Candida albicans* amounts less than the LOD POCT LFIA *Candida albicans*. POCT LFIA *Candida albicans* had a sensitivity of 100% (95% CI 29.24% - 100%), specificity of 89.29% (95% CI 71.77% - 97.73%), accuracy of 90.32 % (95% CI 74.25% - 97.96%), LR (+) 9 (95% CI 3,2 - 27,19), LR (-) 0, PPV 50% (95% CI 25.55% - 74.45%), NPV 100% (95% CI 86.28% - 100%) against *Candida* spp. culture examination.

Conclusion: The POCT LFIA *Candida albicans* can be used to diagnose vulvovaginal candidiasis caused by *Candida albicans* in women who complain of vaginal discharge.

Keywords: vulvovaginal candidiasis, *Candida* culture, point of care test, lateral flow immunochromatographic assay