Application of Rapid HIV Testing in a Voluntary Counselling and Testing (VCT) Clinic

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Abstract

Issues
To conduct a pilot project to examine the feasibility and applicability of OraQuick test at a voluntary counselling and testing (VCT) clinic.

Project
This was a randomized controlled study using the OraQuick HIV-1/2 test at an anonymous government HIV VCT Clinic. The rapid test procedures were compared with the standard pre- and post-test procedures during the same period. Nurses obtained whole-blood specimens by finger-stick and provided test results and counselling at each visit. Enzyme immunosorbent assay (EIA) test, followed by Western blot as appropriate, using blood obtained by separate venepuncture was performed for all rapid-test subjects on an opt-out basis. Acceptability of the rapid test by clients was assessed after blood taking.

Results
Five of 224 (2.2%) clients were reactive on rapid test. All 5 positive results were subsequently confirmed by Western blot. 222 out of 224 clients (99.1%) responded to the satisfaction survey; all were satisfied with rapid testing. The total time spent by counsellors for HIV negative and positive clients was statistically significantly longer in rapid test than standard test group.

Lessons learned
Results from this study demonstrate the utility and acceptability of the rapid finger-stick test for HIV antibody among clients in our VCT setting.

Background
Conventional HIV antibody testing using an enzyme immunosorbent assay (EIA) screening and confirmatory western blot approach has all along been adopted. The turn around time for result availability is about 10 days. Yet, increasingly by there are clients who request a faster clarification of their HIV status. We thus set to conduct a pilot study project to examine the feasibility and applicability of OraQuick rapid test in our VCT service.

Methodology

A. Sampling and recruitment of subjects
This was a comparative study on rapid test using a conventional test control group. The rapid test procedures were compared with the standard pre- and post-test procedures to evaluate HIV counselling and testing using rapid test. All eligible subjects accessing nurse counsellors at AIDS Hotline (2780 2211) were systematically sampled in a 2:1 ratio to rapid test group and conventional test group during the study period of Feb to May 2004. The target number of subjects was 200 and 100 for rapid test and conventional test group respectively.

B. The two groups

Rapid test group

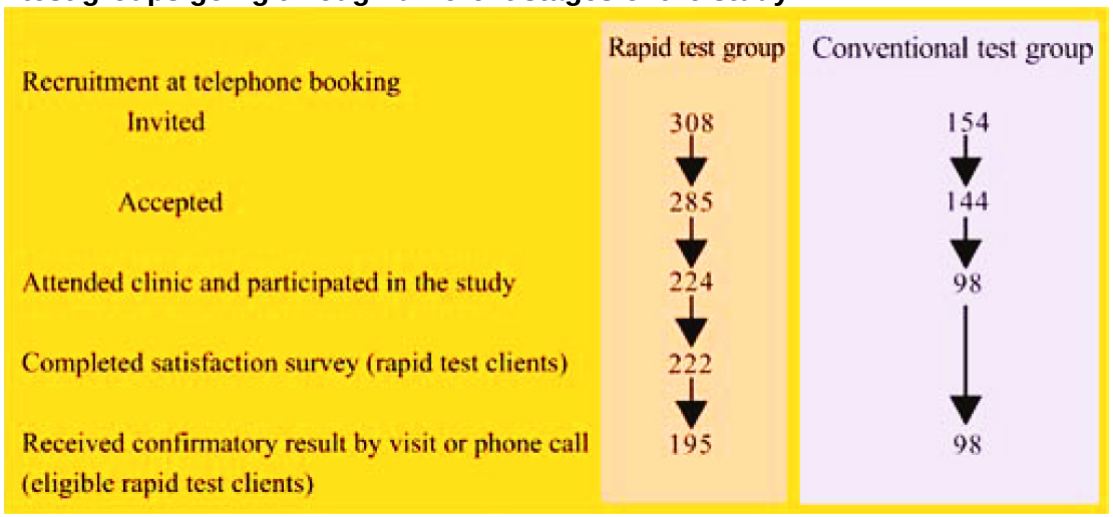
For subjects sampled and recruited to the rapid test group, a parallel conventional HIV antibody test would be offered to them. The participants can opt-out conventional testing during appointment booking at telephone or when they later attended the clinic on site. Pre-test counselling was tailored to rapid testing when the client attended for HIV screening. A self-administered client satisfaction survey on the rapid testing was done after blood taking.

Conventional test group

Subjects sampled to the conventional test group would have basically the same arrangement per usual clinic practice, i.e. pre-test counselling, blood collection by venepuncture, and call for appointment to read result with post-test counselling. Similar to the rapid test group clients, a 3-month period to learn of their conventional test results is allowed and subjects confirmed HIV positive were referred for care.

Results

Figure 1. An overview of the number of clients in rapid test and conventional test groups going through different stages of the study.



HIV test results and knowledge of serostatus

None of the 224 subjects in the rapid test group opted out parallel conventional HIV antibody testing. All received their rapid test results with post-test counselling on the same day of testing. As shown in Table 1, 29 (12.9%) clients of rapid test group vs. none in the conventional test group did not comply with the requirement for clinic attendance or phone call within 3 months to learn of their confirmatory HIV antibody result. In the rapid test group, 219 clients tested negative (97.8%) and 5 tested positive with the rapid test. There was no indeterminate/non-valid rapid test result in this study. Three of the five reactive clients reported that they had been tested HIV positive by EIA test done outside Hong Kong, and they were all prepared for the positive result upon rapid testing. The other 2 rapid test clients also accepted the positive results with counselling. All these five preliminary positive clients were subsequently confirmed by EIA and Western blot testing using serum obtained by venepuncture. Two (40%) of them did not return for reading their confirmatory results within the 3-month period. These 2 clients were couple and non-Hong Kong residents. Husband was tested HIV positive before and alleged that they might not be able to return for the confirmatory result. The other 3 positive clients received post-test counselling at clinic and were referred to government HIV clinic for further care. All the non-reactive rapid tests were found negative subsequently in the

parallel conventional test. There were 3 partners of HIV-infected patients in the rapid test group and they were greatly relieved when learnt of a negative rapid test result. All 98 conventional test group subjects attended for HIV result and post-test counselling within 3 months of screening during the study period. One client tested positive while all the rest were negative. The positive client was referred for HIV care.

Table 1. Knowledge of conventional HIV antibody test results and referral for HIV care (n=322)

	Rapid test group (n = 224) No. (%)	Conventional test group (n = 98) No. (%)	P-Value
HIV conventional test result			
Negative	219(97.8)	97(99.0)	0.671
Positive	5(2.2)	1 (1.0)	
Attended for conventional test result			
Yes, by clinic attendance	15 (6.7)	98 (100.0)	-
Yes, by phone call for eligible cases	180 (80.4)	-	
No, within 3 months	29 (12.9)	0 (0.0)	
HIV antibody positive	2		
HIV antibody negative	27		
Referral made for the client (HIV positive)			
Yes	3(60.0)	1 (100.0)	1.000
No	2(40.0)	0 (0.0)	

Client satisfaction of rapid testing

A satisfaction survey using a standard questionnaire was designed to evaluate the clients' satisfaction of using rapid test. Two hundred and twenty-two (99.1%) clients of the rapid test group responded to the satisfaction survey. Respondents' satisfaction level of using rapid test according to agreement or disagreement to 8 opinion statements was summarized. All respondents preferred receiving results in the same day and were satisfied with the rapid test. For detail information about the satisfaction survey, please refer to see abstract code no. SuPC0097.

Clinic management

The logistic arrangement was more complex in Rapid test group. The total time spent by counsellors for HIV negative and positive clients was thus statistically longer than standard conventional test group. It demonstrated that the increased resource implication support the utility of the rapid test in selected VCT clients.

Conclusion

In the present study, all rapid test clients received their HIV antibody results and tailored counselling. All understood their rapid test results and preferred the procedure. More than 97% of those tested were uninfected. As a consequence, a majority of the clients have their counselling and testing completed in one visit and do not have to attend the clinic again for result clarification. Such single visit would undoubtedly be more convenient for the client than the usual scene of attending the clinic again for antibody result and post-test counselling. Results from this study demonstrate the utility and acceptability of the rapid test for HIV antibody among clients in VCT setting.