TEST KITS FOR SYphilis SCREENING IN BLOOD DONORS)

Rapid Plasma Reagin

TPHA

\[ 95.18\%, 99.91\%, 99.92\%, 99.75\% \]

Bioelisa, Ice Syphilis, New Market

\[ 92.72\%, 98.06\%, 98.06\% \]

\[ 75.24\% \]

\[ 99.18\%, 99.51\%, 99.92\%, 99.75\% \]

ELISA

Bioelisa, Ice Syphilis

New Market

TPHA, ELISA

RPR

ELISA

Bioelisa

New Market

Ice Syphilis

ELISA

Ice Syphilis

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EVALUATION OF TEST KITS FOR SYPHILIS SCREENING IN BLOOD DONORS

KRIANGSAK CHAIWONG  4336067  SITS/M

M.Sc. (TRANSFUSION SCIENCE)

THESIS ADVISORS: PARICHART PERMPIKUL M.D., VIROJE CHONGKOLWATANA M.D. and SOMSRI RATANAWICHTRASIN M.D.

ABSTRACT

The purpose of this research is to evaluate the sensitivity and specificity of three different Enzyme Link Immunosorbent Assay (ELISA) test kits compared with Rapid Plasma Reagin (RPR) assay which currently is used for syphilis screening in blood donors and to compare sensitivity and specificity between different ELISA test kits. One thousand two hundred and fifty unselected donor samples and 206 Treponema pallidum Hemagglutination (TPHA) positive donor samples from Thai National Red Cross were included in this research. TPHA was used as gold standard.

The sensitivity of ELISA test kits: Bioelisa, Ice Syphilis and New Market were 92.72%, 98.06%, 98.06% respectively while the sensitivity of RPR was 75.24%. The specificity of Bioelisa, Ice Syphilis, New Market and RPR were 99.18%, 99.51 %, 99.92 %, 99.75 % respectively. A discordant result between TPHA and ELISA test kits was observed. RPR assay missed 13 TPHA positive cases and Bioelisa missed 15 TPHA positive cases. All cases were detected by New Market and Ice Syphilis ELISA.

Data from this research showed that ELISA had comparable specificity and higher sensitivity than RPR. Different ELISA tests kit for Syphilis screening have different sensitivity and specificity. New Market and Ice Syphilis are more suitable because they have slightly higher sensitivity, higher specificity and significantly greater accuracy than Bioelisa.

KEY WORDS: SYPHILIS / T.PALLIDUM / ELISA / EVALUATION

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