A Low Budget DISC-ELISA for hepatitis-B Surface Antigen (HBsAg)

Abstract

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A Low Budget DISC-ELISA for hepatitis-B Surface Antigen (I4BsAg)

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Abstract

An enzyme linked immunosorbent assay (ELISA) described in 1971 for the detection of immunoglobulin-G (IgG) was similar to radioimmunoassay (RIA) but used an enzyme as a label instead of an isotope[1]. This technique received considerable attention in recent past including the detection of HBsAg*. To reduce the cost, the test needs modification according to different requirements and conditions. Such a modification has already been done by us developing a micro-ELISA technique for the detection of HBsAg, where the commercially available reagents were used to combination with our preparations

The ELISA kits available commercially in the market for testing of HBsAg including the techniques based on micro-RLTSA are quite expensive. Every country has its own import policies, so in addition to its original cost, a large sum paid as tax and freight charges make test too expensive to use for routine purposes.

In most of the developing countries where hepatitis B virus is a major cause of post-transfusion injection, routine screening of the blood donors for HBsAg is either not carried out at all or less sensitive techniques are being used. In fact high cost of the commercial kits are the major constraints and therefore low budget sensitive techniques are preferred.

The present paper described the performance of Disc-RLISA on nitrocellulose membrane discs. The technique is essentially a modification of micro-RLISA where both the cost as well as time have been reduced significantly.