

Methylprednisolone Injection Did Not Inhibit Anti-Hbs Response Following Hepatitis B Vaccination in Mice

Authors : P. O. Ughachukwu, P. O. Okonkwo, P. C. Unekwe, J. O. Ogamba

Abstract : Background: The prevalence of hepatitis B viral infection is high worldwide with liver cirrhosis and hepatocellular carcinoma as important complications. Cases of poor antibody response to hepatitis B vaccination abound. Immunosuppression, especially from glucocorticoids, is often cited as a cause of poor antibody response and there are documented evidences of irrational administration of glucocorticoids to children and adults. The study was, therefore, designed to find out if administration of glucocorticoids affects immune response to vaccination against hepatitis B in mice. Methods: Mice of both sexes were randomly divided into 2 groups. Daily intramuscular methylprednisolone injections, (15 mg kg⁻¹), were given to the test group while sterile deionized water (0.1ml) was given to control mice for 30 days. On day 6 all mice were given 2 µg (0.1ml) hepatitis B vaccine and a booster dose on day 27. On day 34, blood samples were collected and analyzed for anti-HBs titres using enzyme-linked immunosorbent assay (ELISA). Statistical analysis was done using Graph Pad Prism 5.0 and the results taken as statistically significant at p value < 0.05. Results: There were positive serum anti-HBs responses in all mice groups but the differences in titres were not statistically significant. Conclusions: At the dosages and length of exposure used in this study, methylprednisolone injection did not significantly inhibit anti-HBs response in mice following immunization against hepatitis B virus. By extrapolation, methylprednisolone, when used in the usual clinical doses and duration of therapy, is not likely to inhibit immune response to hepatitis B vaccinations in man.

Keywords : anti-HBs, hepatitis B vaccine, immune response, methylprednisolone, mice

Conference Title : ICVH 2015 : International Conference on Viral Hepatitis

Conference Location : London, United Kingdom

Conference Dates : September 25-26, 2015