

ABSTRACT

Human gamma globulin (HGG) was administered intraperitoneally to a freshwater farmed fish, *Labeo rohita*. Four groups were made. Group A was kept untreated. Group B received single injection of HGG and was sampled after 1st, 2nd and 3rd week of HGG administration. Groups C and D were exposed to HGG twice with the gap of 12 and 28 days respectively and were sampled after 1st, 2nd and 3rd week of 2nd injection. Samples were taken to carry out humoral antibody detection, HGG localization, proliferation and histological changes in kidney, spleen and liver. No antibody titres were produced following primary immunization while little titres were produced following secondary immunization. HGG was found to be localized mainly in kidney and spleen and was concentrated at peak at 3rd week of antigen administration. Similarly mitotic activity was also enhanced at 3rd week. Histological changes observed were degeneration of hematopoietic tissue, disintegration of tubules and glomerulus in kidney, degenerative changes in spleen and vacuolization, cirrhosis and degeneration in hematopoietic tissue of liver.