

ORIGINAL RESEARCH ARTICLE

Effect of Uniplant on Liver Function in Egyptian Women with Asymptomatic Hepatitis B Virus Infection

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Abstract

Uniplant is a single 35mm contraceptive implant releasing norgestrel acetate with an effective life span of one year. This study was undertaken to evaluate the possible effects of three-year use of uniplant on some liver enzymes (SGPT, SGOT and GGT) in Egyptian women and to evaluate whether the past asymptomatic hepatitis B virus infection would predispose to any changes in these enzymes. This is an uncontrolled prospective study including 187 women of reproductive age who desired contraception for three years (three segments each year). They were apparently healthy on clinical assessment with no history of jaundice or liver diseases. They also had normal levels of liver function enzymes (SGPT, SGOT & GGT). Fasting blood samples were drawn at admission for assessing the levels of these liver enzymes and to detect anti-HBS antibodies as a marker of past asymptomatic hepatitis B virus infection (HBV) and HBS antigen to diagnose the chronic carrier state. The liver enzymes were measured at 6th, 12th, 18th, 24th, 30th and 36th month of use, and 3-6 months after implant removal. Out of 187 subjects enrolled 159, 83 and 33 women completed one, two and three years of Uniplant use respectively. The mean levels of SGPT, SGOT and GGT showed slight but significant elevations at the end of the first and second years of use compared to the pre-insertion levels. By the end of the third year, the elevated mean values of all enzymes gradually decreased to approach the pre-insertion levels without any significant differences. The percentage of anti-HBS antibodies positive titre due to past asymptomatic infection was 23.3% (n = 41) while HBsAg positive antigenaemia (i.e., carrier state) was 3.4% (n = 6). In both groups of women - anti-HBS antibodies positive (n = 41) without antigenaemia and anti-HBS antibodies negative (n = 129) - the changes in the mean levels of all enzymes during uniplant use were closely similar without any statistical significance. These results demonstrated that: (1) uniplant induced slight but significant elevations in the mean levels of SGPT, SGOT and GGT; these elevations were within the normal ranges, completely reversible and of doubtful clinical significance. (2) The non-carrier women who had been exposed to past asymptomatic HBV infection showed no significant effects on the studied liver enzymes compared to the normal women during long-term use of Uniplant. (*Afr J Reprod Health* 2005; 9[1]: 24-31)

Keywords: Uniplant, liver, enzymes, antibodies

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