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Hepatitis B immune status in an at-risk population: long-lasting vaccine immunity but insufficient coverage

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Background: HBV vaccine has been proposed in France to all infants since 1994, and to all children aged 11 from 1994 to 1998. Originating in the nineties, vaccine hesitancy may lead to incomplete vaccine coverage; at-risk adults may therefore not be protected. We aimed to determine hepatitis B vaccine coverage of adults attending a free testing center for sexually transmitted infections (FTC-STI).

Material/methods: As part of the routine care, three classes of data were anonymously collected in subjects attending Grenoble FTC-STI during 3 months: the results of hepatitis B serologic tests; the date and number of past anti-HBV immunization(s) (if any) according to health record; and the risk of STI and blood-transmitted infections (BTI).

Results: Seven hundred and thirty-five subjects were included (mean age 27.9±9.2 years; males 59.9%). According to health records (produced by 341 subjects), 56.6% and 67.2% had received at least 3 and 1 vaccine injection(s), respectively; 51.9% had received their last injection in the year 1995, 1996 or 1997, consistently with a highly active vaccine policy during these years in France. According to serologic test, 33/705 had evidence of past or active HBV infection; in the 672 others,

55.3% had anti-HBs antibody titer ≥ 10 IU/l. Seroprotection rate increased with age, and was not higher in subjects considered at risk for STI or BTI. The persistence of protective antibody titer was high: 90.5% and 60.3% of the subjects who received their last vaccine injection more than 15 years before had anti-HBs antibody concentration above 10 and 100 IU/ml respectively.

Conclusions: Hepatitis B vaccine coverage is low in this population. Most of the vaccinated subjects were immunized in 1995-1997, suggesting a failure of catch-up immunization of adolescent and at-risk grown-up. Seroprotection has a high persistence, which should be mentioned when proposing the vaccine to at-risk adults.