Prevalence of hepatitis B virus in people with learning disabilities

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The prevalence of hepatitis B virus infection is thought to be higher in institutions for people with a learning disability than in the general population (Clarke *et al*, 1984). People with Down's syndrome are reported to be at higher risk than other learning disability groups. The prevalence of hepatitis B surface antigen (Hbs Ag) in Great Britain is in the order of 1 in 500 of the blood donor adult population (Department of Health, 1980). This rate is lower than those reported from countries in Europe, Africa and Asia. The present study was to identify those residents in an institution for people with a learning disability with a positive response to the test for Hbs Ag.

The study

The study included 360 residents of Turner Village Hospital, of whom 195 were males and 165 females. The sole criterion for inclusion in the study was the absence of previous immunisation against hepatitis B. Ninety-five per cent of the population studied had severe to profound learning disabilities. Thirty were diagnosed as having Down's syndrome. Some residents had been previously tested for Hbs Ag. Blood samples from all were tested for Hbs Ag by reverse passive haemagglutination and for anti-Hbs by enzyme-linked immunosorbent assay (ELISA). Those who were seropositive were tested for the presence of Hbe core antigen.

Findings

Of all the 360 residents tested six were positive for Hbs Ag (prevalence rate of 1.7%). Of all the 30 residents with Down's syndrome tested one was positive for Hbs Ag (prevalence rate of 3.3%). All those seropositive were males. Seroconversion has occurred in one resident who was tested negative in 1987. Three of the seropositive patients were admitted to the institution before the age of ten years, and five before 30 years. Duration of their stay in hospital ranged from eleven to 45 years (mean=26 years). One patient was positive for Hbe core antigen (super-carrier status).

Comments

The study shows a hepatitis B carrier rate of 1.7%, which is lower than the prevalence rates ranging from 3 to 53% shown in earlier studies (Van Damme & Meheus, 1989). Although higher than the 0.2% rate in the UK general population, this does not compare to the high prevalence rates reported in most previous studies. Similar findings of low prevalence were however reported by Thomson *et al* (1989) and Tevaluto-Aarnio (1974). Although previous studies have found people with a Down's syndrome to have a higher carrier rate for Hbs Ag, reaching 60% in one study (Clarke *et al*, 1984), our study found only one person (prevalence rate 3.3%). Our study is consistent with others which found a higher prevalence of Hbs Ag in male residents institutionalised for more than ten years (Blumburg & Baruch, 1979; Lohiya *et al*, 1986).

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