Systemic Lupus erythematosus following Hepatitis B Vaccine

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Systemic lupus erythematosus (SLE) is a connective-tissue disease the specific cause of which remains undetermined. An autoimmune physiopathologic process is undoubtedly involved, probably onto a genetic predisposition. Now, some chemical agents are able to produce a lupus-like syndrome, the features of which associate antinuclear antibodies directed to the DNA-histones complex, normal levels of complement, and absence of antibody to native DNA [1]. Recombinant hepatitis B vaccination is effective and well tolerated [2], and is more and more often offered to the general population in industrial countries. Serious adverse reactions are very rare [3], including immune-mediated diseases such as thrombocytopenic purpura [4], erythema nodosum [5], and glomerulonephritis [6]. To our knowledge, the first case of SLE identified as occurring following antihepatitis B vaccine was reported by Tudela et al. [7]. McMahon et al. [3] too noticed 1 case of cerebritis secondary to systemic lupus after hepatitis B vaccine, out of 43,618 vaccinated persons. However, they rejected it as an inappropriate diagnosis of adverse reaction to vaccination [3]. We report here another case of SLE following such an immunization.

A 26-year-old mixed-blood social worker woman was given a first recombinant antihepatitis vaccine dose (GenHevac-B) in September 1994. One week later, she experienced fever and chills, then a vaginal discharge, followed by cutaneous eruption of the face, arms and legs. She was referred to the local hospital where ocular and pulmonary involvements were noticed. Cutaneous biopsy showed lupus-like histopathologic changes but immunofluorescence was negative, as antinuclear antibody testing. In November, the diagnosis was assessed by antinuclear antibodies at 1/500 homogeneous, Farr test 92 IU, complement component C3 246 (normal range 550-1,200) and C4 level 58 (200-500) mg/l. Like Tudela et al. [7], we believe that vaccination can induce an immune stimulation that may reveal or trigger a latent autoimmune genetic predisposition. The mechanism seems different from the chemical or drug-induced lupus-like syndrome, and closer to classical SLE. Whether thimerosal used as preservative, or aluminium hydroxide used as adjuvant, or Hb surface antigen protein [8] as in polyarteritis nodosa is the cause of the syndrome [2], LED should now be added to the list of rare recombinant hepatitis B vaccine side-effects. When any immune lupus-like manifestation occurs, the patient should be checked up on systematically about a recent antihepatitis B vaccination, and the protocol be stopped, antinuclear antibody testing should be performed 3 months later. An early short corti-costeroid course may be relevant. We are indebted to Mr. Eric Woljung for assistance in the preparation of the manuscript.

References

Hess E: Drug-related lupus. *N Engl J Med* 1988;318:1460-1462.

Eddleston A: Modern vaccines: Hepatitis. *Lancet* 1990;335:1142-1145.

McMahon BJ, Helminiak C, Wainwright RB, Bulkow L, Trimble BA, Wainwright K: Frequency of adverse reactions to hepatitis B vaccine in 43,618 persons. *Am J Med* 1992;92:254-256.

Poullin P, Gabriel B: Thrombocytopenic purpura after recombinant hepatitis B vaccine. *Lancet* 1994;344:1293.

Goolsby PL: Erythema nodosum after Recombivax HB hepatitis B vaccine. *N Engl J Med* 1989;321:1198-1199.

Carmeli Y, Oren R: Hepatitis B vaccine side-effect. *Lancet* 1993;341:250-251.

Tudela P, Marti S, Bonal J: Systemic lupus erythematosus and vaccination against hepatitis B. *Nephron* 1992;62:236.

Borisova W, Krel PE: Systemic lupus erythematosus etiologically due to the hepatitis B and C viruses. *Ter Arkh* 1992;64:92-93.

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