Disseminated BCG infection in a ten-month-old child after BCG vaccination

A ZAIEM, S FERJANI, R SAHNOUN, R DAGHFOUS, M LAKHAL, S EL AIDLI
Centre National de Pharmacovigilance, Recueil et Analyse des effets indésirables, Tunisia

Introduction:

The disseminated BCG infection is a very serious complication, usually fatal, of bacillus Calmette-Guerin (BCG) vaccine. The risk of its occurrence is increased when the child is vaccinated early, before immune deficiencies are detected. We report a case of disseminated BCG infection in a ten-month-old child who had been vaccinated by BCG vaccine at birth.

Case report:

BY has been vaccinated at the age of one day by BCG vaccine, at the left upper limb. No incident was noted on the first days of vaccination. At the age of 40 days, she developed left supra clavicular and axillar abcessed lymph nodes. The same lymph node recurred at the age of six months. She was treated each time by surgical flattening of the lymph adenopathy followed by an antibiotic therapy. No biopsies were performed. Few weeks after the second episode, cutaneous ulcerative lesions appeared next to the left supraclavicular region and then extended to the trunk. Cutaneous biopsy was performed and showed lesions compatible with tuberculosis. X-rays showed osteolysis of P1 of the middle finger in the left hand. She was treated by anti tuberculosis antibiotics.

Discussion:

The role of BCG vaccine is valued as probable in the genesis of the disseminated BCG infection because of the chronologic and semiological data. The delay in our case was 40 days. In literature, the delays varied from weeks to months after vaccination. The symptoms in our case were made of abscessed lymph nodes, ulcerative lesions and osteolysis at the ipsilateral side of the injection. In the literature, lesions are usually ipsilateral to the injection.

Disseminated BCG infection appears usually as a result of impaired immune system of the host (severe combined immunodeficiency with autosomal recessive pattern of inheritance, interferon À receptor deficiency, interleukin 12 deficiency). Lymphadenitis or osteomyelitis have also been reported with the use of unusually virulent strains.

Conclusion:

This case reported an exceptional serious adverse effect of BCG vaccine.