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Acute Febrile Neutrophilic Dermatosis (Sweet's Syndrome) Following BCG Vaccination

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Several factors may trigger or be associated with Acute febrile neutrophilic dermatosis (AFND). We report a case of AFND following BCG vaccination as an interesting association although no direct interrelation can be certified. *Key words: Vaccinations; Intradermal tests.* (Received October 29, 1985.)

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The cause of acute febrile neutrophilic dermatosis (AFND) is unknown. Different mechanisms have been suggested such as an altered immunological activity with hypersensitivity to various infectious antigens, abnormal chemotactic stimulation or abnormal leukocytic chemotactic response. Several potential triggering factors have been described in large series (1, 2, 3, 4).

CASE REPORT

We report a case of AFND following a BCG vaccination. A 23-year-old Caucasian girl gave a history of good general health. She used a contraceptive pill and occasional multiple vitamin preparations. Since she denied any previous BCG vaccination and remained negative to intradermal tuberculin tests, her physician performed an intradermal freeze-dried BCG vaccination (0.08 ml, Statens Serum Institute, Copenhagen). Fifteen days later, she developed an influenza-like syndrome with fever (39°C), fatigue, which failed to respond to systemic tetracyclines. The general clinical examination was within normal limits. There were erythematous and infiltrated cutaneous plaques, particularly on the forehead, the cheeks, the chin, the shoulders. On the right thigh, where the BCG had been performed, there was an erythematous, infiltrated, ulcerated nodule, without any lymphadenopathy. Sedimentation rate was elevated (55), with leukocytosis (12 000/mm^3) and neutrophilia (74%). Histological examination of one of the cutaneous lesions was typical and AFND. The patient was given potassium iodide, 900 mg/day. Within 48 hours the infiltration dramatically disappeared leaving erythematous macules which progressively faded away. The BCG lesion on the right thigh also faded dramatically.

DISCUSSION

Our case shows an interesting association of AFND following BCG vaccination. To our knowledge no previous case has been described. Two cases occurred three days after

small pox vaccination (3). AFND lesions on a previous tuberculin scratch test were described (5) as well as cutaneous hyperreactivity to tuberculin skin test in patients with AFND (6, 1). A flare-up of AFND lesions three days after tuberculin test was also observed (7). Positive tests within normal range were obtained with tuberculin, streptokinase–streptodornase tests, but no reaction with candidine, trichophytine, mumps (8). Alphahemolytic streptococcus pharyngitis followed by AFND with typical AFND lesion on a cutaneous injection of this bacteria were described (9). Reactions to staphylococci, candida and trichophyton antigens were strong in the cases observed by Pistritto (10) and Raff (11).

The different range of cutaneous reactivity reported here above could be related to several factors: the patient's altered imunological activity in AFND, the type and the concentration of the antigens, the technique used.

Several factors could trigger or be associated with AFND. We mention our case as a further one, although no direct interrelation can be certified.

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