Correspondence

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Adverse Effects of Intramuscular Iron Injection

I.		Amitai
M.		Acker

Jerusalem

I. Amitai, MD, M. Acker, MD, Pediatric Department, Hadassah University Hospital, Mount Scopus, P.O. Box 24035, Jerusalem 91240 (Israel)

Iron dextran preparations have long been blamed for causing systemic and local side effects. Allergic purpura was reported following intravenous administration of iron dextran [1]. The local side effects consist of pain, inflammation and brownish discolorations at the injection site [2]. We report here a child who had allergic purpura and another with lipomyodystrophy at the injection site, following intramuscular iron dextran injection.

Case 1: A 21-month-old infant was admitted because of edema of the eyelids and a hemorrhagic rash of the lower limbs. A week before his admission iron deficiency was found and he was treated by intramuscular injections of iron dextran (Impheron®). Several hours after the third injection of 100 mg of iron dextran, fever, edema of the eyelids and a red rash on the legs occurred. The rash consisted of discrete purpuric lesions in a symmetric distribution at the posterior aspect of

Fig. 1. Case 2: the dimple on the left buttock following injection of iron dextran preparation.

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both legs. The purpura processed rapidly in the following hours, but was limited to the lower limbs. Subsequently, swelling and redness developed over both feet. Platelet count and coagulation studies were normal and the tourniquet test was negative. The rash disappeared after a week.

Case 2: A 6-month-old infant was examined because of a dimple which occurred on his left buttock several days before admission. At 5 months, anemia had been found and was treated elsewhere with a 50-mg intramuscular injection of iron dextran (Impheron). Local changes were not noted until 1 month later when a dimple was observed at the site of the injection on the left buttock.

On examination, a 1.5 X 1.5 X 1.5 cm dimple was noted (fig. 1). There was loss of fat and muscle tissue at the injection site. The dimple gradually disappeared and the buttock returned to its normal shape about 7 months later.

Discussion

The symmetric distribution of the rash and the normal coagulation studies in our first patient imply vasculitis due to hypersensitivity to the drug.

The second patient had a dimple at the injection site which consisted mainly of loss of subcutaneous fat and some loss of muscle tissue. The lesion resembled the classical

lipodystrophy secondary to insulin injection. The gradual disappearance of the dimple was similar to the spontaneous regression of the insulin-induced lipodystrophy which may occur after several months [3]. Insulin injection as well as other potential causes of local lipodystrophy such as injection of triamcinolone acetate [4], triple (DPT) immunization or antihistaminic preparations [5] were all excluded in this patient.

To the best of our knowledge, this is the first report of lipodystrophy at the injection site following iron dextran injection.

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