

Short Communication

Perimenstrual dermatitis secondary to a copper-containing intrauterine contraceptive device

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The sensitizing potential of copper is very low and allergic reactions are rare (1). Several cases of dermatitis caused by internal exposure to copper in intrauterine contraceptive devices (IUCDs) have been described (2–5).

Case Report

A 41-year-old woman was referred to our Department in May 1996 with a 2-year history of a recurrent, self-healing skin eruption, associated with abdominal pain. Past medical history disclosed cholinergic urticaria since 1995. The patient had had a copper-containing IUCD placed 12 years earlier. The eruption followed a cyclical pattern, invariably appearing 3 to 7 days before menses, and tending to improve spontaneously with the onset of bleeding. This non-itchy rash was associated with abdominal distension and cramps that followed a similar course.

Physical examination during a flare of the eruption showed an apparently healthy woman with multiple non-itchy symmetrical erythematous papules on the upper trunk, neck and arms. No other associated symptoms were noted. Fever, enlarged lymph nodes and hepatosplenomegaly were absent. The rest of the physical examination was unremarkable. Full blood cell count and biochemical evaluation contained no abnormalities. Biopsy of an erythematous papule revealed only discrete spongiosis and a mild perivascular lymphocytic infiltrate in the upper dermis. An intradermal test to synthetic progesterone showed no reaction.

Patch testing gave the following positive results: nickel sulfate +++, ethylenediamine hydrochloride +, cobalt chloride +, and copper sulfate 2% ++. The IUCD was removed and the abdominal symptoms subsided at the following cycle. Progressive resolution of the dermatitis was observed. Although the rash was still present, its severity and extent decreased during the following cycles. No cutaneous eruption was observed after 8 months and no new lesions developed after a further 5-month period of follow-up.

Comment

Several skin disorders may appear or worsen during the perimenstrual period (6, 7). Autoimmune progesterone dermatitis (APD) is the cutaneous manifestation of allergy to endogenous progesterone (6, 8). Systemic contact dermatitis from copper-containing IUCDs is rare (9). Patch testing has demonstrated sensitization to copper sulfate and also, frequently, to nickel sulfate. In our patient, development of a rash associated with abdominal pain, a positive patch test to copper sulfate, and resolution of symptoms after IUCD removal, seem to implicate the copper-containing IUCD as the causative factor.

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