

Semicircular lipoatrophy after intragluteal injection of benzathine penicillin

Aycan Kayıkcıoglu, MD, Mustafa Akyürek, MD, and Yücel Erk, MD

From the Department of Plastic and Reconstructive Surgery, Hacettepe University School of Medicine, Sıhhiye, Ankara, Turkey

A 3-year-old girl had localized lipoatrophy after an intragluteal injection of benzathine penicillin G. No associated abnormalities were found. (J Pediatr 1996;129:166-7)

Lipoatrophy refers specifically to loss of subcutaneous fat. Three types of lipoatrophy are recognized: total, partial, and localized. Localized lipoatrophy occurs in four clinical forms: semicircular, circular (lipoatrophia annularis), centrifugal, and panatrophy of Gowers. Semicircular lipoatrophy may be idiopathic¹ or traumatic as a result of an injection of insulin, iron dextran, triamcinolone, and diphtheria-pertussis-tetanus vaccine.² This traumatic form of lipoatrophy can be induced by an allergic destruction of fat cells, as in the case of insulin injections. This process usually begins 6 months to 2 years after institution of bovine or porcine insulin injections. Far fewer reports of lipoatrophy have been reported with the use of recombinant human insulin.³ Intramuscular injections of triamcinolone have been implicated by a direct traumatic and hormonal destruction of fat cells.⁴ Idiopathic semicircular lipoatrophy develops during a period of several weeks as a circular depression with no epidermal changes on the lateral aspect of the arm or extensor aspects of the thighs, and has been reported occasionally to resolve without treatment.⁵ Other types of localized lipoatrophies are not associated with injection of medications.

Despite the fact that intragluteal injection of medications in children has many complications, it is still a common practice to inject benzathine penicillin G and other medications into the buttocks. We report localized lipoatrophy that developed in a 3-year-old girl 3 months after intragluteal injection of benzathine penicillin G.

CASE REPORT

A 3-year-old girl was seen in our clinic because of a skin depression in her left gluteal region. Three months earlier, 1,200,000 units

of benzathine penicillin G had been injected intragluteally for the treatment of otitis media. The parents did not recollect local tenderness, redness, discharge, abscess, or necrosis. The child's medical history was unremarkable. Physical examination revealed an oval skin depression and subcutaneous fat atrophy, 4 × 5 cm in size, on the upper outer aspect of the left gluteal region (Figure). The overlying skin was normal. No erythema, tenderness, or change in skin color was noted. The patient was in otherwise good health.

DISCUSSION

There are many reports⁶⁻⁹ in the literature documenting complications associated with intramuscular injection of penicillin. The most serious and frequent complication of gluteal injection has been injury to the sciatic nerve.⁷ Infants, in particular, are susceptible to this complication because of their small gluteal muscle mass.⁶

Ischemic changes of the lower extremity and gluteal region have also been described after intramuscular injection of penicillin. Most such cases result from accidental intraarterial injection of the medication.⁸⁻¹⁰

The history and physical findings in our case were compatible with the diagnosis of localized semicircular lipoatrophy caused by intragluteal injection of benzathine penicillin G. Although there are many reports in the English-language literature documenting complications of intramuscular injection of penicillin, this lipoatrophic complication either has not been emphasized or has not been reported to date.

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Reprint requests: Aycan Kayıkcıoglu, MD, Taskent Sok 7/7, 06600 Kurtulus, Ankara, Turkey.

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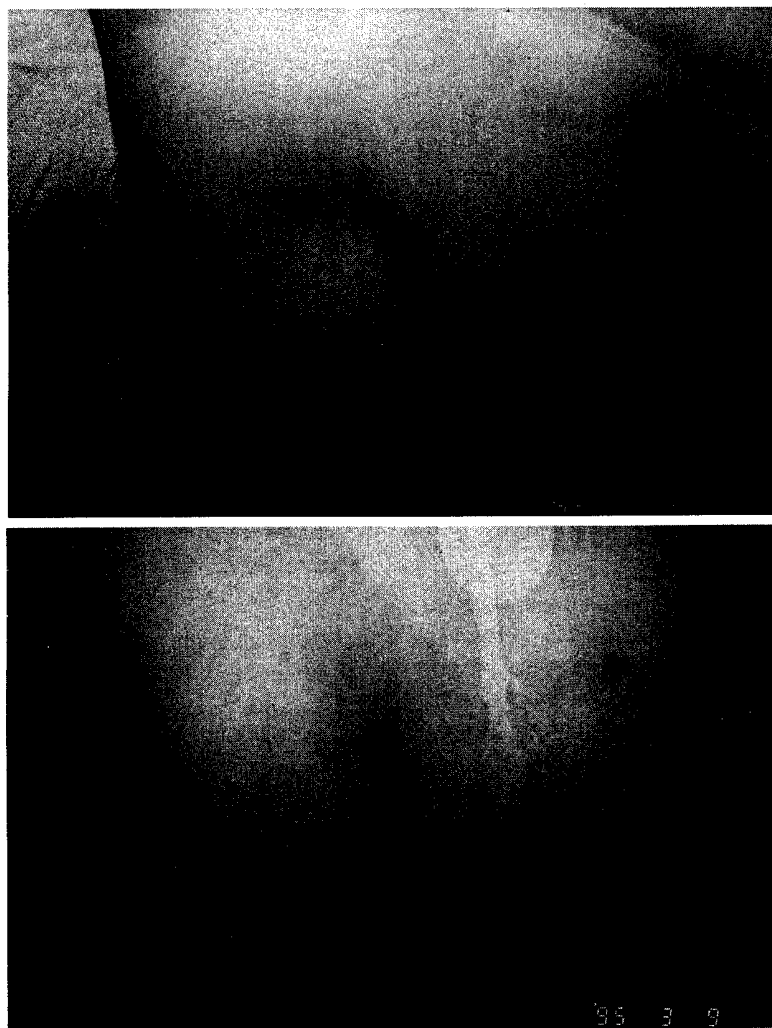


Figure. A, Oblique view of the atrophic region. B, Posterior view of the atrophic region.

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