

What Is Your Diagnosis?



A 25-year-old woman presented to the dermatology clinic with transverse linear depressed plaques on her anterior left thigh.

PLEASE TURN TO PAGE 477 FOR DISCUSSION

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The authors report no conflict of interest.

The Diagnosis: Semicircular Lipoatrophy

A 25-year-old woman with no remarkable medical history presented to the dermatology clinic with a 3-month history of an asymptomatic mass on her anterior left thigh. It had increased in size initially, but the growth seemed to have leveled off by the time she presented to us. It was more prominent while standing and the patient found the appearance to be bothersome. She denied any injections or trauma to the site; however, upon further questioning, she reported leaning against the sink with her thigh while applying makeup in the morning.

On examination, there was no mass; instead, there were 2 transverse linear depressed plaques measuring approximately 4 cm each on the anterior left thigh (Figure, A). The overlying skin was unaffected in appearance and texture. Magnetic

resonance imaging showed the skin, subcutaneous tissues, muscles, and osseous structures of the left thigh to be of normal signal intensity. A skin biopsy was not performed.

No specific therapy was given. The patient avoided any trauma to her thigh over the next 6 months, which included discontinuation of leaning against her sink or any tables at work. During that time, she had slow and spontaneous resolution of her transverse linear thigh depressions (Figure, B).

A clinical diagnosis of semicircular lipoatrophy caused by repetitive, external, minor trauma was made because the patient displayed several characteristics of the disorder. Most reported cases have involved women in their 20s and 30s.¹⁻⁴ Onset occurs over weeks and may resolve in months to years. Semicircular lipoatrophy typically presents as 2- to 4-cm transverse linear depressed plaques on the anterior thighs. Most cases are bilateral; however, a few have been unilateral,⁴ such as our patient. Occasionally, patients complain of heavy legs, a burning sensation, or a tired feeling.^{2,4,5}



The anterior left thigh with transverse linear depressed plaques (A). Anterior left thigh 6 months after presentation (B). Spontaneous resolution caused by avoiding trauma to the thigh.

The exact cause of semicircular lipoatrophy has not been proved, but the leading theory suggests that the condition is secondary to repetitive, external, minor trauma.^{1,2,6,7} In many cases, after stopping the behavior that was causing the trauma to the legs, resolution occurred within several months.^{1,2,4,7}

There have been reports of multiple cases of semicircular lipoatrophy in the workplace. Senecal et al¹ described 18 patients in one company who developed the condition from leaning against their desks and De Groot⁴ described 10 patients who developed semicircular lipoatrophy because of pressure on the legs from using new chairs provided by their company; however, most cases are sporadic. In another case,² the patient's condition was caused by leaning against the sink while applying makeup in the morning, which is the same proposed mechanism in our patient. Therefore, we feel this is a case of semicircular lipoatrophy induced by repetitive, external, minor trauma to the anterior thigh that resolved with abstaining from applying daily pressure on the area.

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