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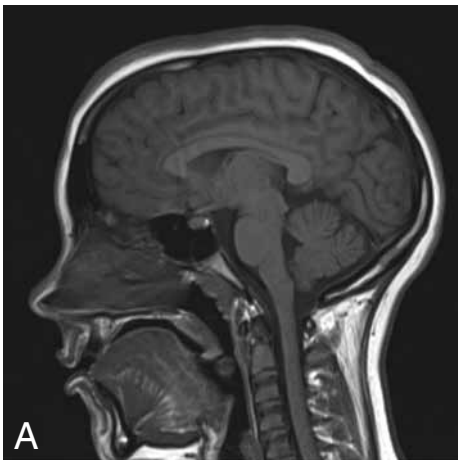
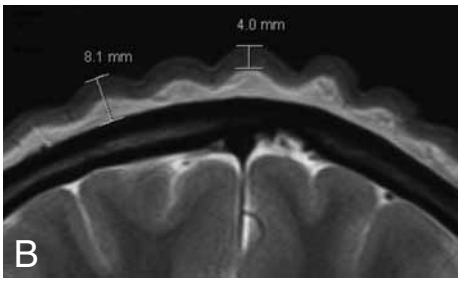
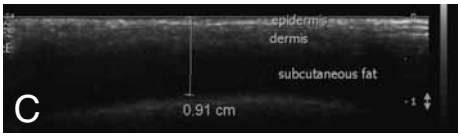
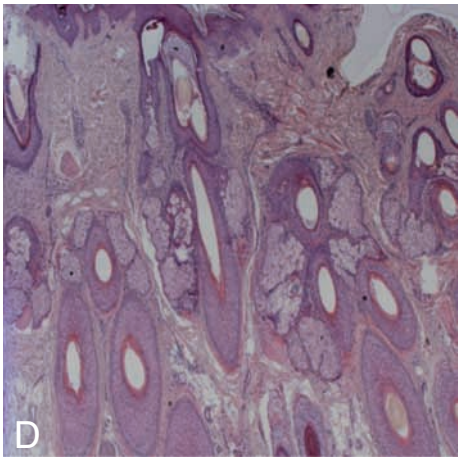
IMAGES IN CLINICAL RADIOLOGY









Lipedematous scalp: a rare dermatological entity

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A 16-year-old Caucasian girl was admitted at the request of her physician who had noticed a soft spongy texture of her scalp. The patient had no significant discomfort or ongoing symptoms and was aware of this abnormality for a long time. There was no previous trauma history. No family members showed any similar conditions. On dermatological examination, her scalp had an increased subcutaneous thickness extending from the occiput to the vertex, compared to that of a normal scalp. The skin appeared normal and hair was abundant. No signs of inflammation were found. Her general health was good. Blood analysis was considered to be within normal limits. Marked thickening of the subcutaneous fat layer on the vertex and occipital areas was noted by magnetic resonance imaging (Fig. A – sagittal T1-weighted image & Fig. B – coronal T2-weighted detail view). On fat-suppressed T1-weighted images, signal intensity of fat tissue was decreased. Brain parenchyma and ventricles appeared normal. Ultrasonographic complementary investigation with a 12-MHz linear transducer showed that the epidermis and dermis were normal but total thickness of the scalp measured 8-9 mm (Fig. C). The thickness of a scalp of a teenager is normally half as thick as our patient's scalp. Histological study demonstrated the normality of epidermis and dermis, without evidence of inflammation or fibrosis. There was a marked hyperplasia of subcutaneous adipose tissue with mature adipocytes (Fig. D). The findings were consistent with a diagnosis of lipedematous scalp.

Comment

Lipedematous scalp or lipoedematous scalp (LS) is a rare disease of unknown etiology characterized by a thick, boggy scalp. Cases associating local hair loss are known as lipedematous alopecia (LA), and are more frequent and easy to recognize. To our knowledge, 8 cases of LS have been reported in the literature. The first of them was described by Cornbleet in 1935. It was a 44-year-old black woman who had soft and thick scalp tissue that felt as if it was underlaid with cotton. Thereafter, authors have reported this pathology, with the support of MRI and/or US for the latest. Although initially it was considered that both entities (LS and LA) occur predominantly in black patients, the increase in the number of reports in Caucasian and Asian patients decreased racial factors in the pathogenesis of the disease. It is worth noting that most of the reported cases occur in women. Only one case has been reported in a child. The mean thickness of the scalp in normal individuals is estimated at 5-6 mm. In the reported cases, scalp thickness was greater, at 10-16 mm. The common histological feature is prominent increase of subcutaneous fat tissue which extends into the deep dermis. The adipose tissue is usually mature and organized. A mild peri-vascular inflammatory infiltrate can be detected in some cases. In this case, there was no loss of hair follicle (seen in LA). This thickening and softening of the scalp may be widespread or limited. In most occurrences, the condition is slowly progressive over a period of a few years and then it stabilizes. In conclusion, LS and LA are scalp disorders that radiologists should have knowledge of because these disorders are not difficult to diagnose when the clinical description of thick and spongy scalp textures are found.

Reference

1. Yasar S., Mansur A.T., Goktay F., et al.: Lipedematous scalp and lipedematous alopecia: report of three cases in white adults. *Journal of Dermatology*, 2007, 34: 124-130.

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