Clinical History:

25-year-old man with cephalgia, with incidental finding on brain CT.
No relevant medical history.

Imaging Findings:

In brain CT, we observe a tubulonodular fat density lesion, with peripheral linear calcifications. It is located in pericallosal region, adjacent to the anterior falk cerebri. These findings suggest a pericallosal lipoma. The corpus callosum is difficult to assess, the region above seems to be normal but we cannot see its rear portion properly. In the bone window, we can observe some frontal bone scalloping.

MRI study was later performed to confirm diagnostic, to evaluate corpus callosum and to discard any associated lesions. In the study, we can observe an extra-axial homogeneous fat signal lesion, located frontal left, adjacent to the falk cerebri, with pericallosal extension, findings consistent with a pericallosal lipoma, tubulonodular type. It measures 10 cm (height) x 5.6 cm anteroposterior (craniocaudal) x 2 cm (laterolateral). It associates dilatation of temporal and occipital horns of left lateral ventricle but no signs of transependymal oedema suggesting hydrocephalus.

Discussion:

A pericallosal lipoma is a fat containing lesion occurring in the interhemispheric fissure, with close relation to the corpus callosum, which is often abnormal. This anatomical region is the most common location for an intracranial lipoma.

They are rare, found in only 1 in 2,500 to 1 in 25,000 autopsies. Approximately 50% of patients present with seizures [1]. With the extensive use of prenatal US many cases are being detected incidentally in utero.

Pathology

This lesion is considered to be the result of an abnormal persistence and differentiation of the meninx primitiva into lipomatous tissue [1] Normally resorption occurs between the 8th and the 10th week of gestation.

Radiographic features

Pericallosal lipomas can be grouped into two distinct types based on imaging: tubulonodular and curvilinear. Tubulonodular pericallosal lipomas are the more common variety. They are rounded or lobular and usually measure > 2cm in thickness. They are anteriorly situated and are associated with callosal alterations. This variety can extend into the choroid plexus / lateral ventricles. [2]

Curvilinear pericallosal lipomas are usually thin, elongated and curvilinear along the corpus callosal margin. They usually measure <1 cm in thickness and are more posteriorly situated. The corpus callosum is only mildly
hypoplastic. [2]  
CT is diagnostic, demonstrating fat density mass (-80 to -110HU). The tubulonodular variety may demonstrate peripheral curvilinear calcification as seen in our case.  
The diagnosis of intracranial lipoma on MR imaging, shows a homogeneous well-circumscribed lesion displaying the characteristic short-T1 and T2 signal of fat. [2, 3]  
In a small minority of pericallosal lipomas, a connection with extracranial subcutaneous lipomas is seen. This may be through a skull defect (cranium bifidum) in which case the masses are continuous with each other, or via a thin fibrous-lipomatous stalk with an apparently intact skull vault. [5]  
**Differential Diagnosis List:** Pericallosal lipoma, Teratoma, Corpus callosum agenesis, Fatty falx cerebri, Intracranial dermoid  

**Final Diagnosis:** Pericallosal lipoma  

**References:**
Description: Tubulonodular fat density lesion with peripheral linear calcifications. It is located in pericallosal region adjacent to the anterior falx cerebri. Origin: Agencia Sanitaria Costa del Sol (Spain, Marbella). A.I.G. Radiodiagnóstico
Description: The corpus callosum is difficult to assess, the region above seems normal but we cannot see its rear portion properly. Origin: Agencia Sanitaria Costa del Sol (Spain, Marbella). A.I.G. Radiodiagnóstico
Description: Pericallosal tubulonodular fat density lesion with peripheral linear calcifications. Origin: Agencia Sanitaria Costa del Sol (Spain, Marbella). A.I.G. Radiodiagnóstico
Description: In bone window, we can observe inner table scalloping in left frontal skull. Origin:
A.S Costa del Sol, Marbella (Spain) A.I.G. Radiodiagnóstico
Description: Extra-axial fat signal lesion, located frontal left, adjacent to the falx cerebri, with pericallosal extension. Origin: A.S Costa del Sol, Marbella (Spain) A.I.G. Radiodiagnóstico
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**Figure 7**

Description: Dilatation of occipital horn of left lateral ventricle but no signs of transependymal oedema suggesting hydrocephalus. **Origin:** A.S Costa del Sol, Marbella (Spain) A.I.G. Radiodiagnóstico
Description: Extra-axial fat signal lesion, located frontal left, adjacent to the falx cerebri, with pericallosal extension. Origin: A.S Costa del Sol, Marbella (Spain) A.I.G. Radiodiagnóstico
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