Lipoma of the choroid plexus – a case report
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Patient: 32 years, female

Clinical History:

We describe a case of choroids plexus lipoma in the left lateral ventricle in a young woman with headache. Imaging was diagnostic; showing classical appearance on CT and MR. The lipoma was considered incidental and no associated intracranial anomalies were identified.

Imaging Findings:

A healthy 32-year-old lady presented to the casualty with sudden onset of headache. Neurological examination was unremarkable. A CT brain was requested to exclude sub-arachnoid haemorrhage. The CT failed to reveal any evidence of intracranial bleed. A small lipoma, measuring 3 x 2.5 cm was discovered incidentally in the trigone of the left lateral ventricle. An MR performed on the following day revealed a hyperintense lesion in the trigone of the left lateral ventricle on T1 weighted imaging. The lesion appeared bright on T2 and FLAIR, and different from CSF intensity on PD. No contrast enhancement was seen with gadolinium, and a diagnosis of choroid plexus lipoma was confirmed. No other abnormalities were identified. The lady was later discharged following an uneventful recovery.

Discussion:

Intra-cranial lipomas are rare, comprising 0.1 to 0.5 % of all primary brain tumours [1]. They are most commonly midline or near midline. The locations being interhemispheric fissure and/or callosal region (40%–50%); here they are associated with varying degrees of dysgenesis of corpus callosum. Other intracranial locations include quadrigeminal plate and/or supracerebellar cisterns (20%–30%), hypothalamic suprasellar and/or interpeduncular cisterns (10%–20%), cerebellopontine angle cisterns (10%), and Sylvian cisterns (5%) [2,3]. Intracranial lipomas have also been described in the choroid plexus [2]. The earliest descriptions of choroids plexus lipoma in literature date back to 1935, by Scherer and Krainer [4]. A more recent study looking at 5351 CT scans and 1542 MR images reported an approximate frequency of 0.04% and 0.45% for isolated choroids plexus lipomas respectively [5]. They reported a 14% frequency for bilateral lesions. Isolated choroids plexus lipomas are most commonly seen in the trigone of the lateral ventricle [6]. It is suggested that they are not true neoplasms; instead they are congenital malformations resulting from abnormal differentiation of the primitive meninges during development of subarachnoid cisterns and undifferentiated mesenchyme around the brain. They consist of mature fat cells and connective tissue containing blood vessels [2,3]. Unlike true neoplasms, they do not multiply; however, they do hypertrophy like other fat cells when patients gain weight but almost never exert any mass effect [2]. A 20 to 50% association has been seen between choroids plexus lipomas and corpus callosal lipomas. The developmental theory explains this association as well [1]. Most intracranial lipomas are found incidentally during a course of neuroimaging. Surgical intervention is rarely required, with the exception of a lipoma causing hydrocephalus. They are usually
asymptomatic, the symptoms depending on their location. They may be associated with other congenital anomalies such as corpus callosum agenesis, midline anomalies, dysmorphic changes and some vascular variants. Neurologic manifestations, including epilepsy, hemiparesis/hemiplegia, headache, and mental/behavioral disturbances have also been described [2]. However the commonest presenting complaint is thought to be headache (45%), and the commonest associated neurologic manifestation is thought to be epilepsy (11.8%). The association with epilepsy is highest for sylvian fissure lipomas [2]. The lipomas have characteristic fat attenuating appearance on CT. On MR they appear hyperintense on T1, iso to hyperintense on T2 images and hyperintense on FLAIR. They do not show contrast enhancement post gadolinium injection [7]. Fat saturation sequences may make the lipomas isointense to gray matter. Only the larger lipomas e.g. interhemispheric and sylvian fissure ones show chemical shift artefact; however the smaller lipomas found elsewhere may not show obvious chemical shift artefacts [3]. Their signal characteristics differ from CSF on proton density images [8]. Capsular calcification is often seen in interhemispheric lipomas; however calcification is less common in lipomas occurring elsewhere in the cranium [3]. Their appearances in CT and MR are typical. Although choroids plexus papillomas, xanthogranulomas, cysts, carcinomas and dermoids are the potential differentials; typical signal characteristics, lack of enhancement or invasion/surrounding mass effect or oedema makes differentiation of a choroids plexus lipoma from the rest relatively simple.

**Differential Diagnosis List:** Lipoma of the choroid plexus.

**Final Diagnosis:** Lipoma of the choroid plexus.

**References:**

Rahalkar AM, Rahalkar MD. Case report : 2 cases of lipoma of corpus callosum (LoCC) associated with lipoma of choroid plexus ( LoCP ). Indian J Radiol Imaging 2006;16:719-721.


Figure 1

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Figure 3

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Figure 6

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