

Lipomyelomeningocele

Lipomyelomeningoceles (LMMs) are subcutaneous [lipomas](#) with [dural](#) penetration that often present with spinal cord [tethering](#) and may lead to neurological deterioration if untreated.

A type of [Lipomyeloschisis](#).

This subcutaneous [lipoma](#) that passes through a midline defect in the [thoracolumbar fascia](#), vertebral [neural arch](#), and dura, and merges with an abnormally low [tethered cord](#) ¹⁾. These may be terminal, dorsal, or transitional (between the two). The intradural fatty tumor may also be known as lipoma of the cauda equina. In addition to being abnormally low, the conus medullaris is split in the midline dorsally usually at the same level as the bifid spine, and this dorsal myeloschisis may extend superiorly under intact spinal arches ²⁾.

There is a thick fibrovascular band that joins the lamina of the most cephalic vertebrae with the bifid lamina. This band constricts the [meningocele](#) sac and [neural tissue](#), causing a kink in the superior surface of the meningocele.

Asymptomatic lipomas of the [filum terminale](#) occur in 0.2–4% ^{3) 4)} of MRIs.

The dura is dehiscent at the level of the dorsal [myeloschisis](#), and reflects onto the [placode](#). The [lipoma](#) passes through this [dehiscence](#) to become attached to the dorsal surface of the placode, and may continue cephalad under intact arches with the possibility of extension into the central canal superiorly to levels without dorsal myeloschisis. The lipoma is distinct from the normal epidural fat which is looser and more areolar. The subarachnoid space typically bulges to the side contralateral to the lipoma. These lipomas account for 20% of covered lumbosacral masses.

Lumbosacral Lipomyelomeningocele

see [Lumbosacral Lipomyelomeningocele](#).

Presentation

In a pediatric series, 56% presented with a back mass, 32% with bladder problems, and 10% because of foot deformities, paralysis or leg pain ⁵⁾.

Physical examination

Almost all patients have cutaneous stigmata of the associated spina bifida: fatty subcutaneous pads (located over the midline and usually extends asymmetrically to one side) with or without [dimples](#), port-wine stains, abnormal hair, [dermal sinus](#) opening, or skin appendages. ⁶⁾ Clubbing of the feet (talipes equinovarus) may occur. The neurologic exam may be normal in up to 50% of patients (most presenting with skin lesion only). The most common neurologic abnormality was sensory loss in the

sacral dermatomes.

1)

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3)

Uchino A, Mori T, Ohno M. Thickened fatty filum terminale: MR imaging. Neuroradiology. 1991; 33: 331-333

4)

Brown E, Matthes JC, Bazan C, 3rd, et al. Prevalence of incidental intraspinal lipoma of the lumbosacral spine as determined by MRI. Spine. 1994; 19:833- 836

5)

Bruce DA, Schut L. [Spinal Lipomas](#) in Infancy and Childhood. Childs Brain. 1979; 5:192-203

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