

Idiopathic Interdural Hematoma Looking Like a “Chinese Dumpling”

—Case Report—

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Abstract

A 79-year-old man presented with an interdural hematoma manifesting as headache. Computed tomography revealed a right parietal intracranial hematoma. Magnetic resonance imaging revealed the hematoma had divided the dura mater into two layers. Craniotomy was performed and a dural pouch containing a solid hematoma was totally removed. Histological examination showed the hematoma had divided the meningeal dura into two layers. This case confirms the location of interdural hematoma.

Key words: interdural hematoma, intracranial hematoma, magnetic resonance imaging

Introduction

A case of interdural hematoma was identified by magnetic resonance (MR) imaging and confirmed by histological examination.

Case Report

A 79-year-old man presented with a 4-month history of parietal headache. Computed tomography demonstrated a right parietal intracranial hematoma. T₁-weighted MR imaging with contrast enhancement revealed the hematoma had divided the dura mater into two layers, associated with thickening and enhancement (Fig. 1). Angiography revealed no abnormal findings. He had no history of head trauma. He had a medical history of hepatitis, but blood examination including blood coagulative test showed no abnormalities.

A right parietal craniotomy was performed to confirm the preoperative diagnosis of interdural hematoma based on the MR imaging finding that the hematoma was located between the two layers of the dura. A dural pouch containing the solid hematoma, looking like a “Chinese dumpling” was totally removed (Fig. 2), with the surrounding normal dura mater. Histological examination revealed the hema-

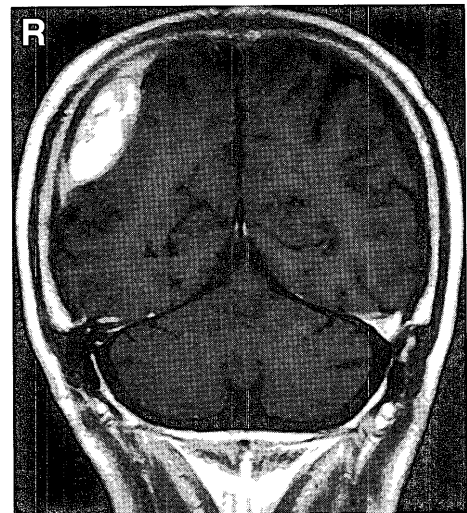


Fig. 1 T₁-weighted magnetic resonance image with gadolinium revealing a hematoma dividing the dura mater into two layers.

toma had divided the meningeal dura into two layers, but the dura mater surrounding the hematoma contained no abnormal vessels or tumor cells (Fig. 3).

Discussion

The dura mater has two layers, the external and

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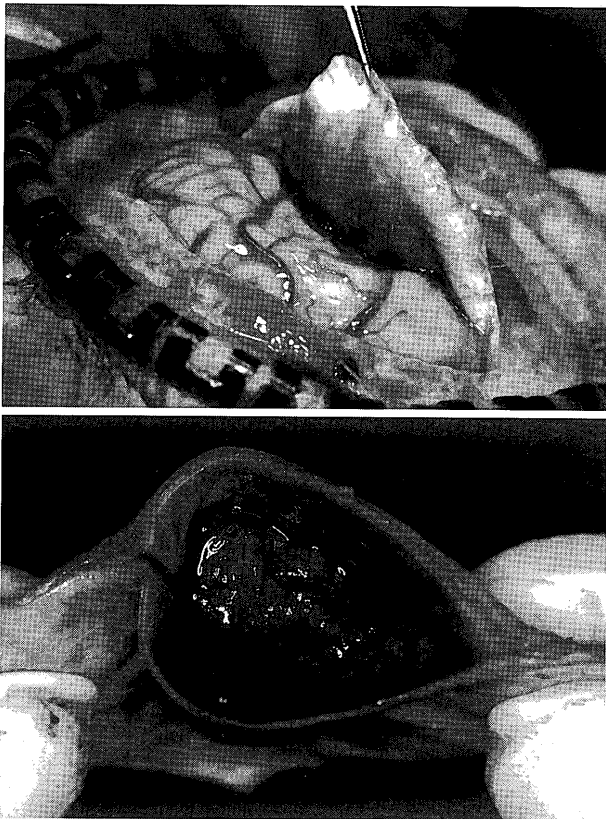


Fig. 2 Intraoperative photograph (upper) and a cross section (lower) of the dural pouch containing the black solid hematoma, looking like a "Chinese dumpling."

inner layers. The external or periosteal dura contains nerves and blood vessels, and has fewer fibroblasts and proportionally more extracellular collagen. The inner or meningeal dura has greater numbers of fibroblasts and proportionally less collagen.^{1,2)} The venous sinuses are located at points where the meningeal dura is reflected off the periosteal dura to form the meningeal reflection. In the present case, the diagnosis of interdural hematoma was confirmed by histological examination, which demonstrated that the hematoma was located between the two layers of the meningeal dura. This case confirms the location of interdural hematoma.

The patient had no history of head trauma or hemostatic disorder. Preoperative radiological findings did not show any pathology causing the interdural hematoma including dural vascular malformation or dural metastasis. Removal of the

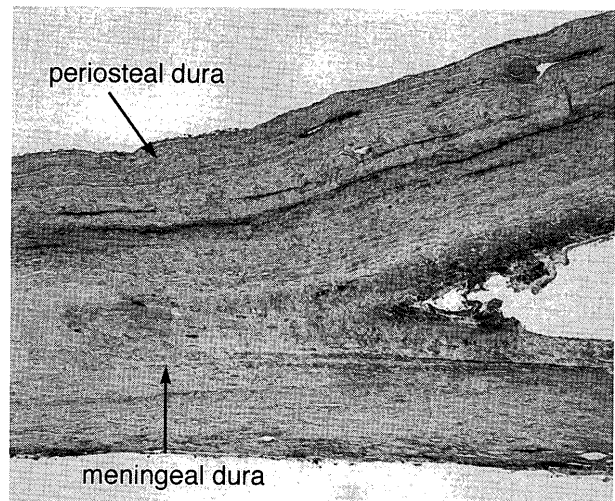


Fig. 3 Photomicrograph showing the hematoma dividing the meningeal dura into two layers. No abnormal vessels and tumor cells are present in the dura mater surrounding the hematoma. H & E stain, $\times 4$.

dural pouch containing the solid hematoma with the surrounding normal dura mater was performed for histological examination of the possible cause. Histological examination revealed that the dura mater surrounding the hematoma contained no abnormal vessels or tumor cells. The hematoma was located between the two layers of the meningeal dura, and had no connection with the venous sinus. Because the meningeal dura has many fibroblasts, inflammatory reaction within the dura mater was presumably associated with the cause of the interdural hematoma.

References

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