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 24 62 (41) 가 4 , 가 4 .
 (2, 3)

(Table 1).

MR 6 1.5-T Magnetom(Siemens, Erlangen, Germany) 2 0.5-T Gyroscan(Philips Medical System, Best, the Netherlands) , (spin echo)

1999 5 20

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Table 1. Summary of the Intracranial Inflammatory Pseudotumor

| Case | Age /Sex | Signs & Symptoms | Location | | Meningeal thickening | | Meningeal based mass | Parenchymal edema | MR Signal intensity in intra/extracranial lesions | | | | Density on Brain CT | | Temporal bone CT | Involved bones |
|------|----------|-------------------------------------|--------------------|--------------|----------------------|---------------|----------------------|-------------------|---|----------|---------|------|---------------------|------------------|------------------------------|----------------|
| | | | Intracranial | Extracranial | Pachymeninges | Leptomeninges | | | T1WI | T2WI | CE | NECT | | | | |
| 1 | 45/M | Hemiparesis | Parietal convexity | - | ○ | - | ○ | +++ | Iso | Low | +++ | Iso | +++ | + | - | - |
| 2 | 35/M | Seizure | Parietal convexity | - | ○ | ○ | ○ | ++ | Iso | Low | +++ | Iso | +++ | - | - | - |
| 3 | 24/F | Confusion | MCF Tentorium | Mastoid MEC | ○ | ○ | ○ | + | Iso/Iso | Low/Iso | +++ / + | Iso | +++ | Bone destruction | Petrous | - |
| 4 | 58/F | Hearing loss Tinnitus | MCF Tentorium | Mastoid MEC | ○ | ○ | ○ | +++ | Iso/Iso | Iso/Iso | +++ / + | Iso | +++ | Bone destruction | Petrous | - |
| 5 | 37/F | Visual loss | MCF CS Tentorium | ITF | ○ | - | ○ | - | Iso/Iso | Low/Low | +++ / + | Iso | +++ | Bone destruction | Sphenoid | - |
| 6 | 35/M | Facial pain Lateral gaze difficulty | MCF CS Tentorium | ITF | ○ | ○ | ○ | - | Iso/Low | Low/Low | +++ / + | Iso | +++ | - | Sphenoid | - |
| 7 | 62/F | Headache | MCF CS Tentorium | PNS ITF | ○ | - | ○ | +++ | Low/Low | +++ / + | +++ | Iso | +++ | - | Sphenoid Ethmoid Petroclival | - |
| 8 | 39/M | Visual loss | MCF ACF CS | Orbit | ○ | - | ○ | - | Iso/Iso | Low/High | +++ / + | Iso | +++ | - | - | - |

Note. - MCF indicate middle cranial fossa; PCF, posterior cranial fossa; CS, cavernous sinus; ACF, anterior cranial fossa; MEC, middle ear cavity; ITF, infratemporal fossa; PNS, paranasal sinus; CE, contrast enhancement; NECT, noncontrast enhanced CT; +, visible; -, non-visible; +, mild; ++, moderate; +++, severe.

T1- (TR/TE, 400-500/10-20) T2- (TR/TE, 3000-3500/100-110) T1- gadopentetate dimeglumine (Magnevist, Schering, Berlin, Germany)

CT 3 Somatom Plus-4 (Siemens, Erlangen, Germany), 1 GE 8800 (GE Medical System, Milwaukee, U.S.A.) CT 2

가 CT 2

MR CT 가 CT

MR T1- T2- 3 (>3cm) 4

MR CT 2

4, 1, 2, 8, 2, 1, 6, 1, 7

(Fig. 1,2).

MR T1- (Fig. 1B, 2A, 3A), (Fig. 1C, 2B, 3B), 1

T2- 7 6 5 3 2 7

T1- 1 2 7

(Fig. 1-3), 1

3 6 3 8 CT CT 2
 5 3 (Fig. 1C, 2B, 3B), 1 (Fig. 2E).
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 5 가 , 2 가
 가 , 1 (xanthoma), (fi-
 , , broxanthoma), (xanthogranuloma), (histio-
 가 2 cytoma), (inflammatory myofibroblas-
 (Table 1). tic tumor), (plasma cell granuloma)
 CT 2 CT (1, 2).

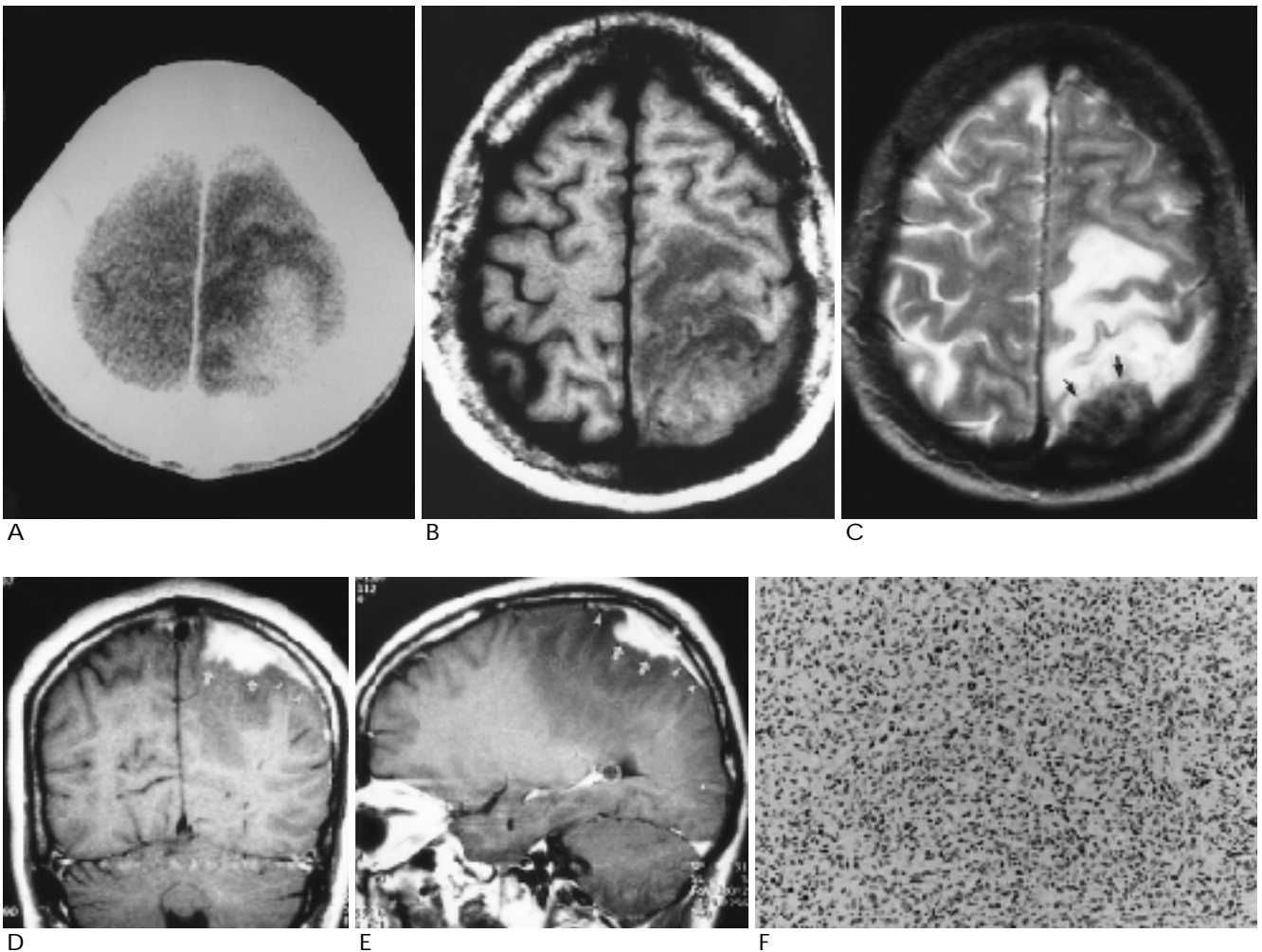


Fig. 1. Case 1: A 45-year-old man with right hemiparesis.

A. Contrast-enhanced CT scan shows a homogeneously enhancing meningeal based mass and surrounding parenchymal low density in left parietal convexity. Precontrast CT showed iso to slightly high density of the mass(not shown).

B. T1-weighted axial MR image shows a meningeal mass of isointensity to the gray matter in left parietal convexity. Area of hypointensity is seen in surrounding parenchyma of the parietal lobe.

C. T2-weighted axial image shows a low signal intensity of the meningeal mass (arrows) in left parietal convexity. Area of hyperintensity in surrounding parenchyma suggests parenchymal edema.

D, E. Contrast-enhanced T1-weighted coronal(D), and sagittal(E) images show a strong, homogeneous enhancement of the meningeal based mass(arrows) and diffuse dural thickening(arrowheads) in the parietal convexity. There is hypointense edema in the surrounding parenchyma.

F. Histopathologic section shows plasma cells, lymphocytes, histiocytes, and some acute inflammatory cells with a background of fibrous tissue (hematoxylin-eosin stain, magnification $\times 100$).

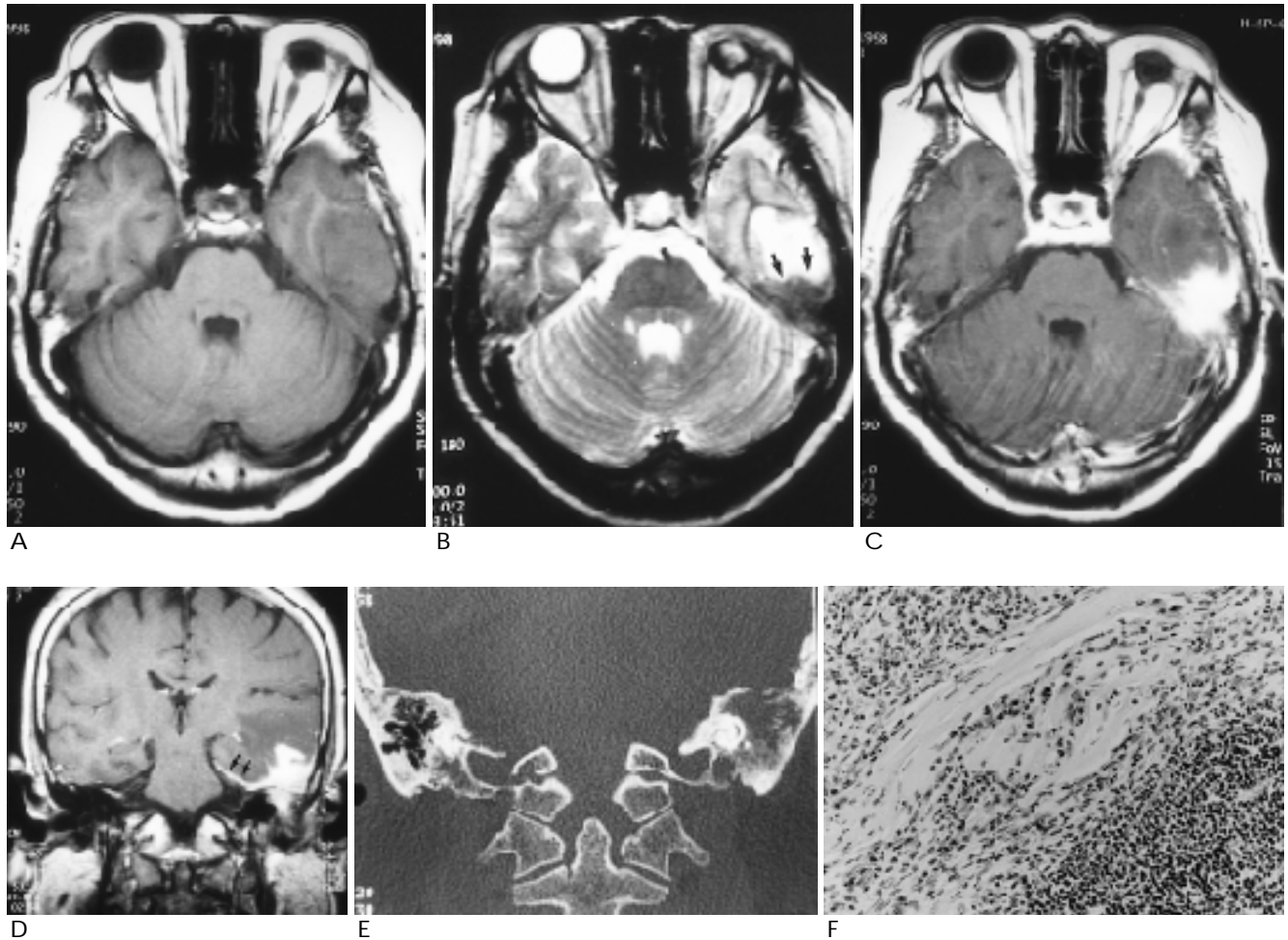


Fig. 2. Case 4: A 54-year-old woman with left side hearing loss and tinnitus.

A. T1-weighted axial MR image shows a lesion with isointensity to the gray matter involving left middle cranial fossa and petrous bone.

B. T2-weighted axial MR image shows a low signal intensity of the lesion (arrows) in left middle cranial fossa along the petrous bone. Area of hyperintense edema is seen in the surrounding parenchyma.

C, D. Contrast enhanced T1-weighted axial (C) and coronal (D) images show a strong, homogeneous enhancement of the meningeal mass in left middle cranial fossa. Pachymeningeal (large arrows) thickening is seen along the left middle cranial fossa and tentorium. There is hypointense edema in surrounding parenchyma.

E. Coronal CT image of temporal bone shows soft tissue density lesion in left mastoid antrum and middle ear cavity. There is bone destruction in tegmen tympani and mastoid antrum.

F. Histopathologic section shows diffuse inflammatory cell infiltration with a background of fibrous tissue (hematoxylin-eosin stain, magnification $\times 100$). The findings of the specimen are similar to that of case 1 (Fig. 1).

(17-19). Spencer (20)
(plasma cell granuloma-histiocytoma
. Seider (21) 가
가 (1, 15). complex)
가
가 (16).
(polyclonality) (1-14).
가
가

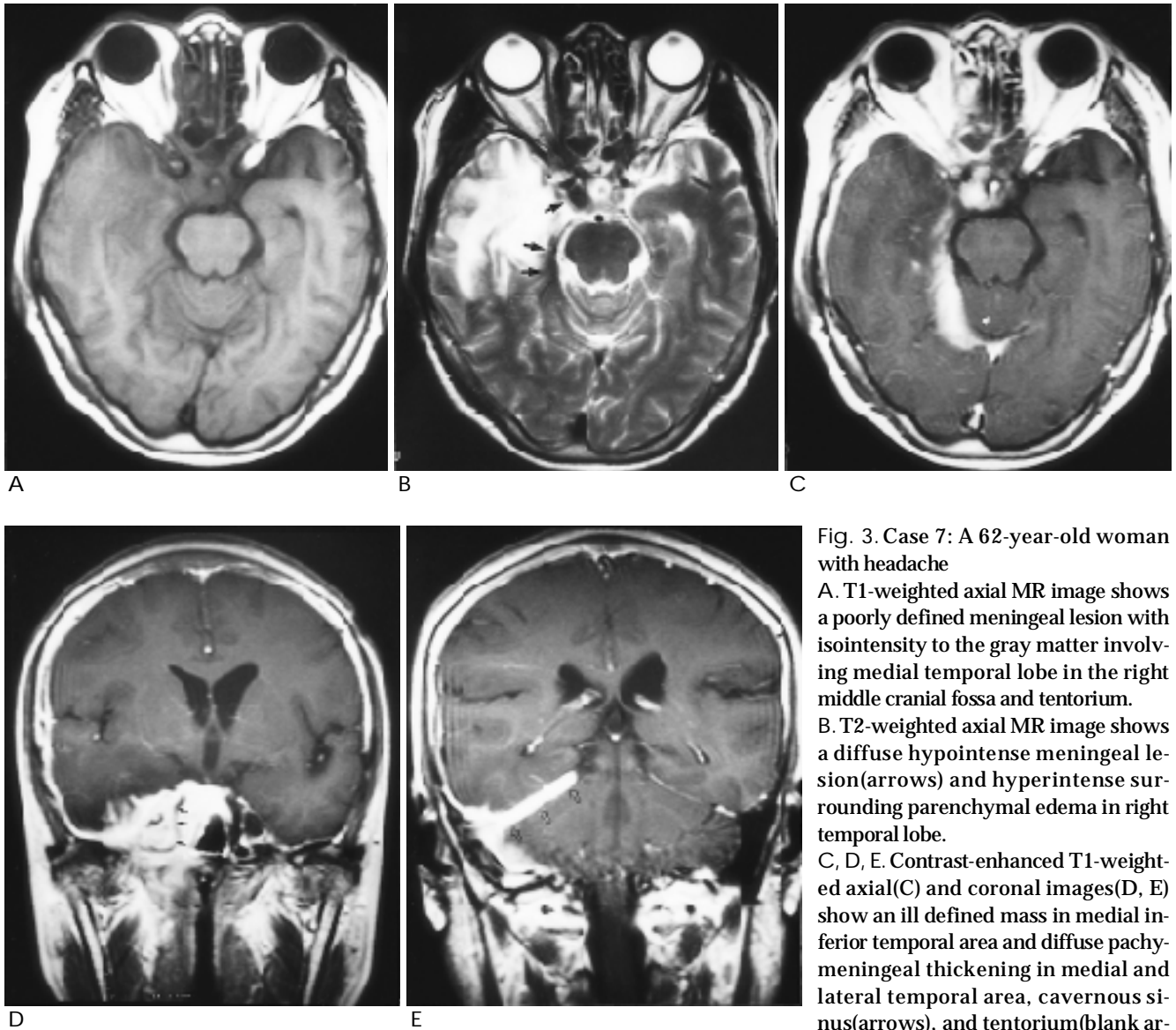


Fig. 3. Case 7: A 62-year-old woman with headache

A. T1-weighted axial MR image shows a poorly defined meningeal lesion with isointensity to the gray matter involving medial temporal lobe in the right middle cranial fossa and tentorium.

B. T2-weighted axial MR image shows a diffuse hypointense meningeal lesion (arrows) and hyperintense surrounding parenchymal edema in right temporal lobe.

C, D, E. Contrast-enhanced T1-weighted axial (C) and coronal images (D, E) show an ill defined mass in medial inferior temporal area and diffuse pachymeningeal thickening in medial and lateral temporal area, cavernous sinus (arrows), and tentorium (blank arrows).

(pathogenesis) 24
 , Epstein-Barr virus
 가
 (13, 22).
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 가 (15, 18, 20).
 가
 (5-14).
 (23, 24).
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CT

62 (41) , 가 4
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(3, 13, 26).

가 가

(15, 26). Bencherif (26) (30, 31, 32). T1- (33, 34).

가 , T2-

T2-

가 T2-

5 . Han (3) 가

1 Atsushi (13) 가

6 가 가

가 MR T1 가

, T2 Han (3) 가

T2 가

가 Makino (8) T2-

T1-

, T2- 1 7 6

3 , 2 , 1 가

가 CT (11, 22). CT 2

(en plaque) , (histiocytosis)

가 MR T1- , T2- (27, 28). T1-

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Intracranial Inflammatory Pseudotumors : MRI and CT Findings¹

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Purpose : The purpose of this study was to describe the MR imaging and CT findings of intracranial inflammatory pseudotumors.

Materials and Methods : We reviewed the MR imaging (n= 8) and CT (n= 4) studies of eight patients (M:F = 4:4, mean age: 41 years) with pathologically proven intracranial inflammatory pseudotumor. The findings were then evaluated with regard to location, shape, MR signal intensity, CT density and degree of contrast enhancement of the lesion, surrounding parenchymal edema, adjacent bone change and the location of accompanying extracranial lesion.

Results : In two patients, the parietal convexity was involved unilaterally, with no extracranial mass, and in the other six, the middle cranial fossa was involved unilaterally and extracranial mass was present. The lesion also involved the tentorium in four cases, the cavernous sinus in four, the anterior cranial fossa in one, and the posterior cranial fossa in one. The location of extracranial mass was the mastoid and middle ear cavity in two cases, the infratemporal fossa in two, both the infratemporal fossa and paranasal sinuses in one, and the orbit in one. MR images showed diffuse dural thickening in all eight cases, leptomeningeal thickening in four, and focal meningeal-based mass in two. As seen on T1-weighted images, the lesions were isointense to gray matter in eight cases, and on T2-weighted images were hypointense in seven cases and isointense in one. Marked homogeneous contrast enhancement was seen in all eight cases. The lesions seen on brain CT, performed in two cases, were isodense. Adjacent brain parenchymal edema and the destruction of adjacent bones were each seen in five cases.

Conclusion : The characteristic MR findings of intracranial inflammatory pseudotumors are (1) diffuse dural thickening; (2) a focal meningeal-based mass which on T2-weighted images is seen as hypointense; and marked (3) contrast enhancement : these findings are, however, nonspecific. In order to differentiate these tumors, an awareness of these findings is, however, useful.

Index words : Skull, MR

Skull, neoplasms

Skull, inflammation

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