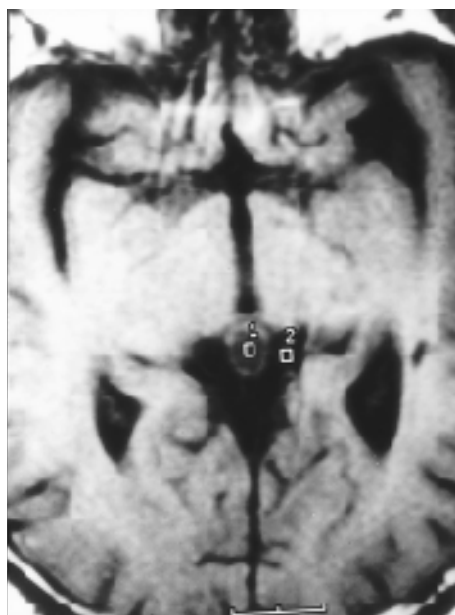


:
 : 1996 6 1999 3 2432
 , , ,
 : 4.4% (107/2432) 1 × 1 × 1mm
 15 × 8 × 9mm (5.97 × 3.87 × 4.82mm)
 53 , 54 가
 가 65 , 가 42 가
 21 , 15 , 6
 T2 가 51 , 가 56
 T1 57 , 50
 . 17
 가 . 51
 . 19
 : 4.4% (1)
 (2) 가 , (3) T1, T2
 (4)
 (5) 가 가 가

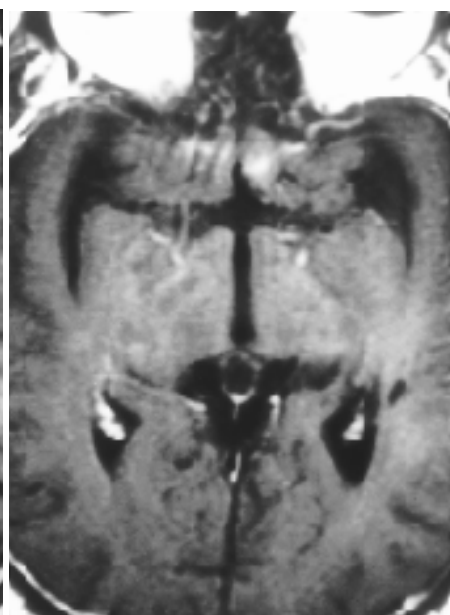
4% 3
 20-40%
 (1, 2).
 (3, 4) 1996 6 1999 3 , 2 10
 가 (5). 2432
 가
 (6)
 가 1.5T (Signa Horizon, GE
 medical system, Milwaukee, U.S.A.)
 T1 T2 . T1
 (TR/TE:550/12) T2
 (TR/TE:4000/112) . T1
 6mm,

1.5mm, 256 × 192, FOV 23 × 23 T2
 6mm, 1.5mm, FOV 23 × 23, T1
 256 × 256, T2
 0.5mm, FOV 21 × 21, 256 × 192
 2
 Gd-DTPA
 12 34
 T2
 T1
 (smooth)

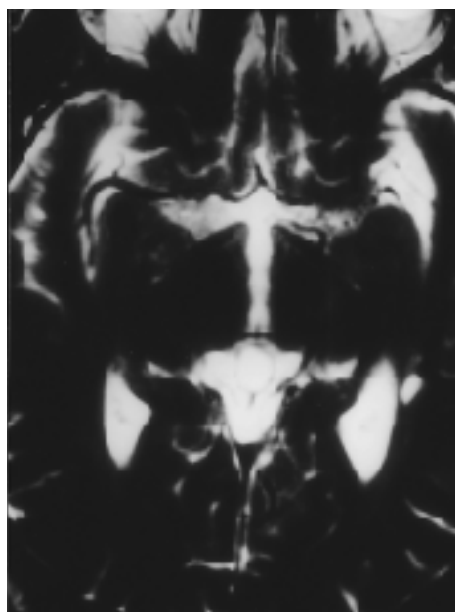
T2
 T1
 ()
 2432 107
 21 78 57
 94:13 107



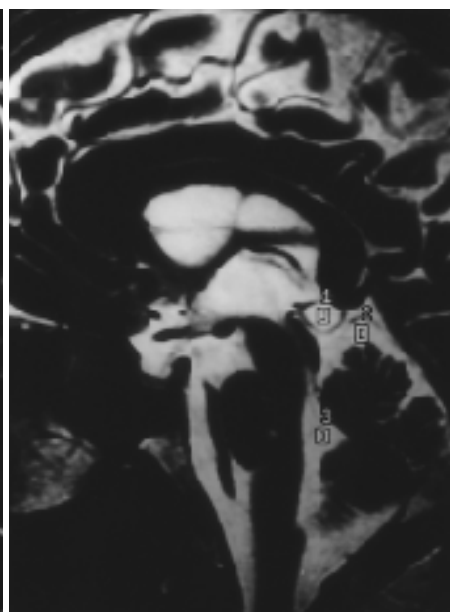
A



B



C



D

Fig. 1. 54-year-old man with headache.
 A. On non-enhanced axial T1-weighted image, An oval cystic mass of $10 \times 7 \times 7$ mm size is located centrally in the pineal gland and the pineal cyst content is slightly more intense than CSF (1:477 ,2:122). The cyst is smooth in contour.

B. Gd-DTPA enhanced axial T1-weighted image shows ring enhancement at the periphery of the cyst.

C, D. Axial and midsagittal T2-weighted images also show the cyst content is slightly more intense than CSF(1:675, 2:583 ,3:503). Flattening of the upper quadrigeminal plate is also seen.

1 × 1 × 1 mm 15 × 8 × 9 mm . 19
 (5.98 × 3.86 × 4.84 mm) 가 . 51
 54 , 53 가 . 19 12 34 (19.7
)
 가 65 (60.7%), 가 42 (Table 1).
 (39.3%) 가
 21 (19.6%),
 15 (14.0%), 6 (5.6%)
 T2 가 51 가
 (47.7%), 가 56 (52.3%) T1 20-40%
 57 (53.3%) , 50 (46.7%) (1).

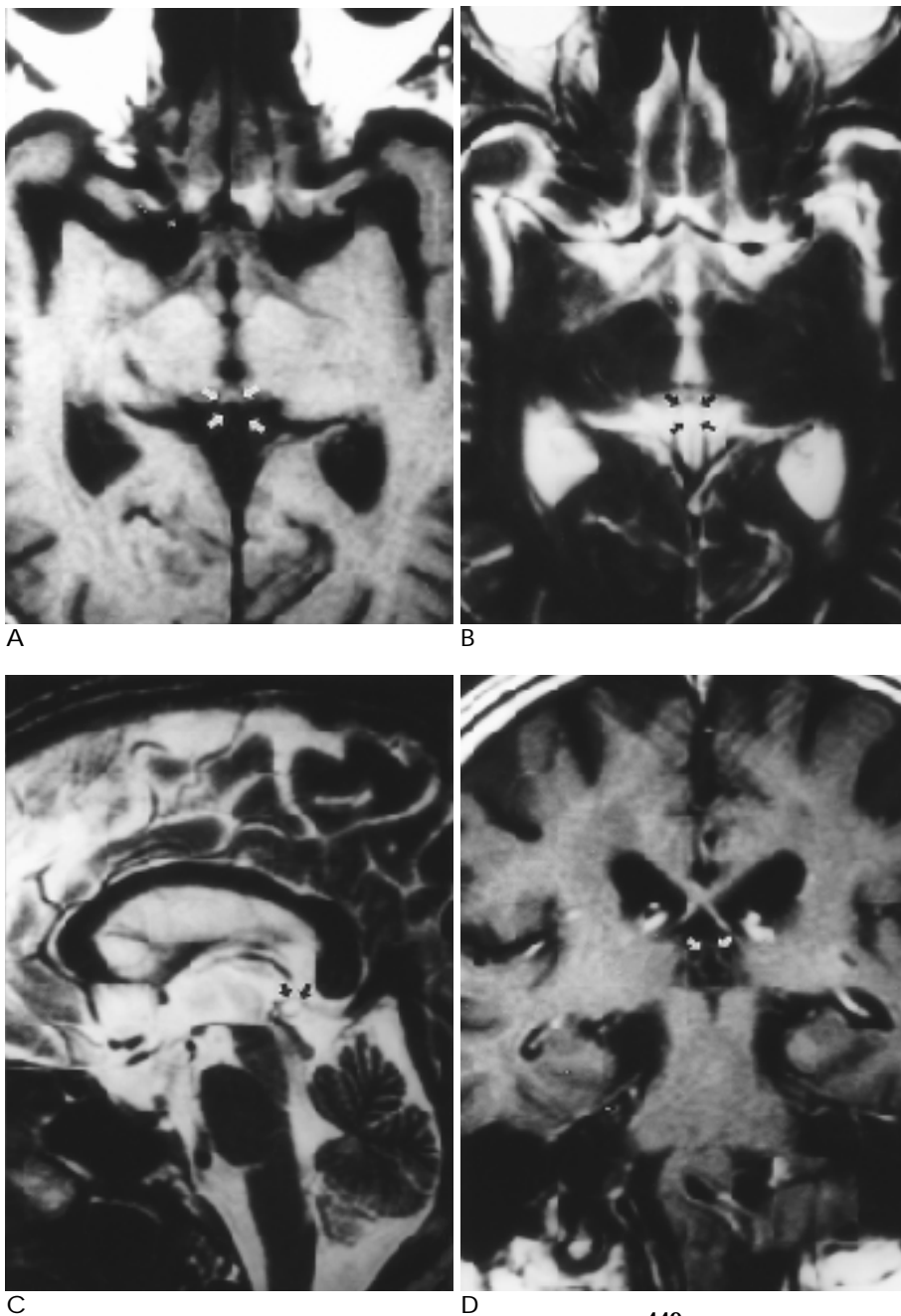


Fig. 2. 48-year-old woman with dizziness.

A, B. Non-enhanced axial T1 and T2-weighted images demonstrate 7 × 5 × 5mm sized oval cyst in pineal gland, which have smooth outer margin with homogeneous in nature

C. Midsagittal T2-weighted image also shows the pineal cyst content is slightly more intense than CSF.

D. On postcontrast coronal T1-weighted image, cystic mass shows complete rim enhancement.

가 가

4% (2). Kappers(8)

3 (plaque)

Megyeri(9)가

가 Tapp

(10)

, Cooper(7) 가

가 0.5mm

Table 1. The Imaging Findings in 19 Patients with Follow up MRI

No	Sex	Age(year)	Size(mm)			Shape	Position	Signal relative to CSF		Enhancing rim	Follow up term(month)	Interval change
			AP	CC	T			T2WI	T1WI			
1	M	52	3	2	3	O	Central	H	H	Y	22	No
2	M	62	4	2	2	S	Posterior	H	H	Y	30	No
3	M	73	15	5	10	O	Central	H	H	Y	15	No
4	M	75	1	1	1	S	Central	I	I	none	19	No
5	M	69	6	3	6	S	Posteroinferior	H	H	Y	13	No
6	M	66	7	5	5	O	Posterior	H	H	Y	21	No
7	M	62	2	2	2	S	Central	I	I	none	24	No
8	F	72	5	5	5	S	Central	H	H	Y	13	No
9	M	66	5	5	5	S	Central	H	H	Y	12	No
10	F	42	7	7	5	S	Posterior	H	H	Y	12	No
11	M	52	13	10	10	O	Central	H	H	Y	15	No
12	M	82	6	4	6	O	Central	H	H	Y	26	No
13	M	78	8	7	7	S	Posterior	H	H	Y	17	No
14	M	27	6	4	5	O	Central	H	H	none	18	No
15	M	55	5	4	5	S	Central	H	H	Y	24	No
16	M	67	5	5	5	S	Posterior	H	H	Y	34	No
17	M	59	9	6	7	O	Central	H	I	Y	21	No
18	M	54	10	7	7	S	Central	H	H	Y	22	No
19	M	55	4	4	4	O	Central	I	I	Y	18	No
Mean		59.8	6.4	4.6	5.3						19.7	

AP: Anteroposterior, CC: Craniocaudal, T: Transverse, O: Oval, S: Spherical, H: High, I: Iso, Y:yes, none: No enhancing study



A

B

Fig. 3. 62-year-old man with no specific symptom.

Initial(A) and 30 months follow-up(B) T2-weighted midsagittal images show the $4 \times 2 \times 2$ mm sized oval cyst with no interval change in the size and the shape.

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MR Imaging of Pineal Cysts¹

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Purpose: To evaluate the incidence and characteristic findings of pineal cyst incidentally detected on magnetic resonance(MR) imaging.

Materials and Methods: Brain MR images obtained in 2432 patients were retrospectively reviewed to determine the incidence and MR findings of pineal cysts, which were evaluated according to their size, shape, location, signal intensity, interval change, contrast enhancement and mass effect on adjacent structures.

Results: Cysts were encountered in 107(4.4 %) of 2432 patients evaluated. Their size ranged from 1 × 1 × 1 to 15 × 8 × 9(mean, 5.97 × 3.87 × 4.82)mm. All were spherical(n= 53) or oval(n= 54) in shape. Their margin was smooth and they were homogeneous in nature. On T1-weighted images, the cysts were seen to be hyperintense(n= 57) or isointense(n= 50) to cerebrospinal fluid, but less so than brain parenchyma. T2-weighted images showed them to be isointense(n= 51) or hyperintense(n= 56) to cerebrospinal fluid. The cysts were centrally located in 65 cases and eccentrically in 42. Compression of the superior colliculi of the tectum was demonstrated in 17 cases(15.9 %). No patients presented clinical symptoms or signs related to either pineal or tectal lesions. Peripheral enhancement around the cyst after Gd-DTPA injection was demonstrated in 51 cases(100 %). Follow-up examinations in 19 cases demonstrated no interval change.

Conclusion: The incidence of pineal cysts was 4.4 %. The MR characteristics of simple pineal cysts include: (1) an oval or spherical shape, (2) a smooth outer margin and homogeneous nature, (3) isosignal or slightly high signal intensity to cerebrospinal fluid on whole pulse sequences, (4) ring enhancement after contrast injection, (5) an absence of interval change, as seen during follow up MR study. These MR appearances of pineal cysts might be helpful for differentiating them from pineal tumors.

Index words: Pineal body, cysts
Pineal body, MR

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