NRWS@Kyoto
International Session

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69 y.o., Female

Chief Complaint:

Bilateral legs motor weakness.

Past History:

Right breast cancer, treated (more than 10 years ago).

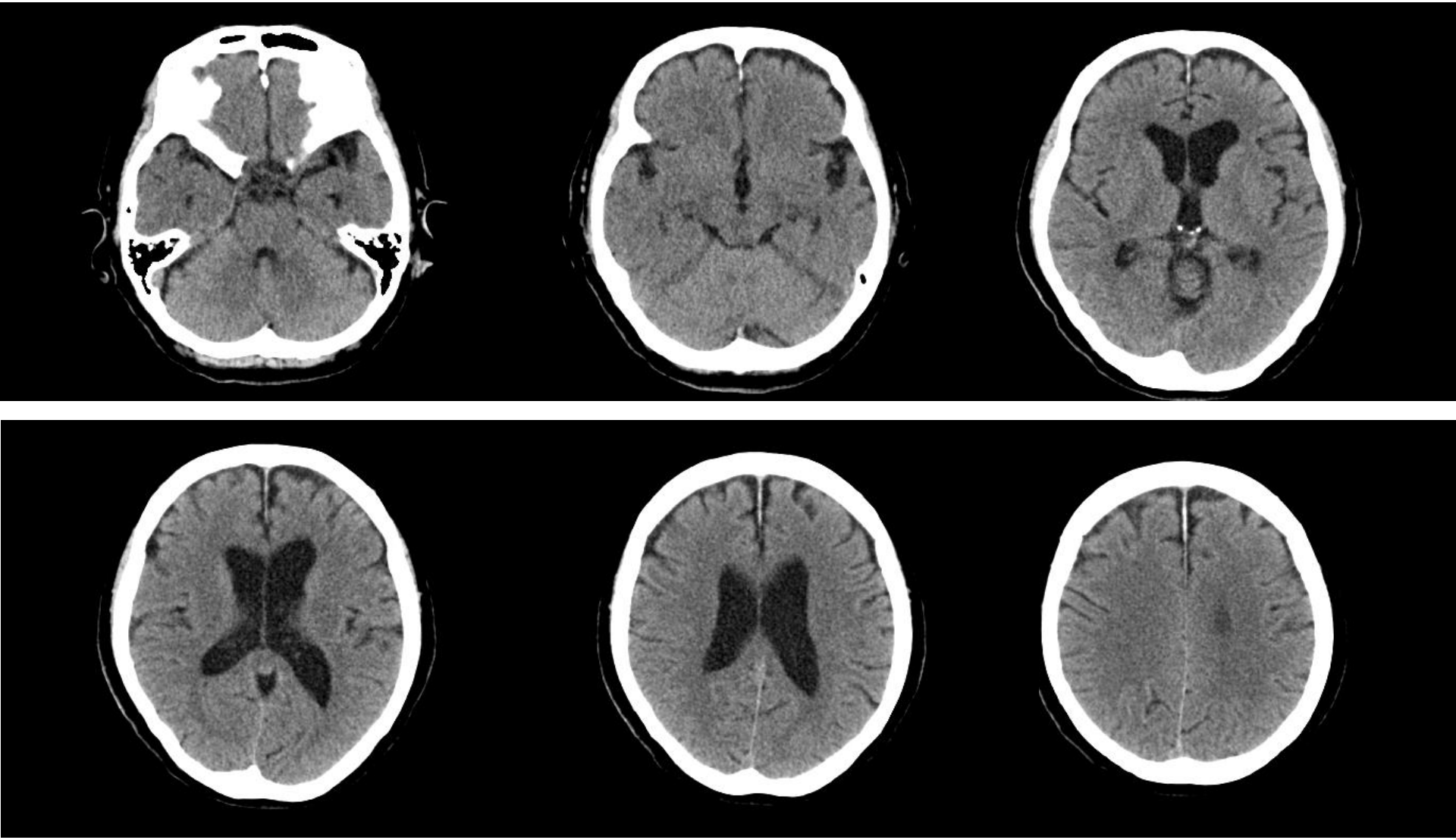
History of Present Illness:

She had gradual bilateral legs motor weakness and consulted a doctor in our hospital.

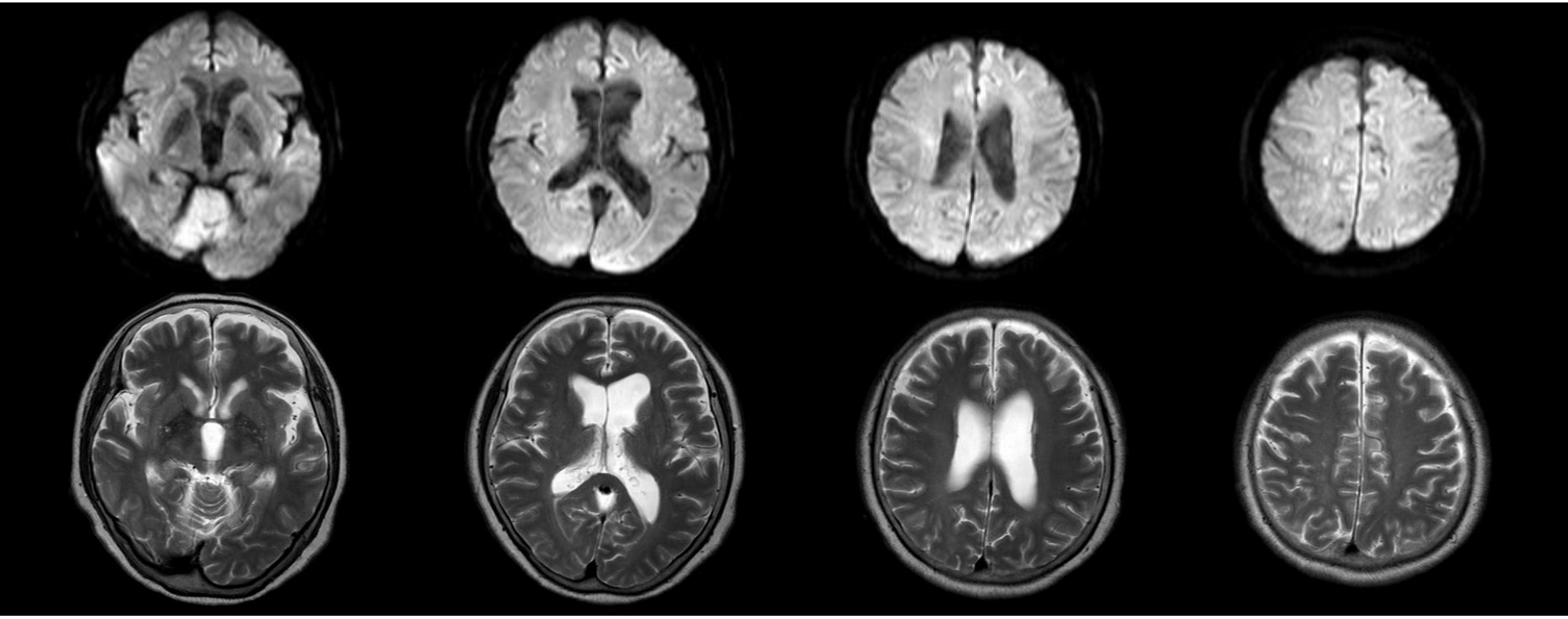
69 y.o., Female

Laboratory Data on Admission			
Total Protein	6.9 g/dl	Hb	11.4 g/dl
Albumin	3.5 g/dl	CRP	1.44 mg/dl
AST	19 U/l		
ALT	8 U/l	***CSF study***	
BUN	29 mg/dl	Total cells	3 /μl
Creatinine	1.11 mg/dl	Monocytes	3 /μl
Na	143 mEq/l	PN Leucocytes	<1 /μl
K	3.9 mEq/l		
Cl	104 mEq/l		
WBC	11990 /μl		
RBC	4.02 $\times 10^6$/μl		
Plt	227 $\times 10^3$/μl		

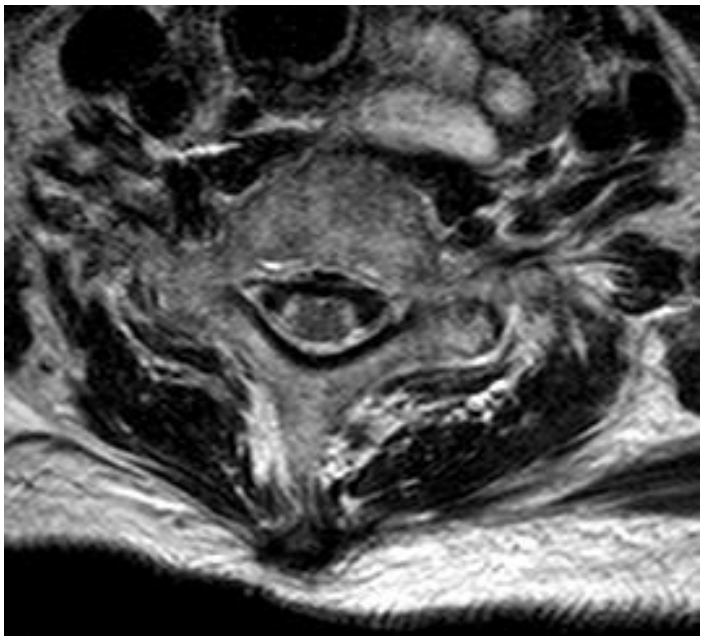
CT on admission (7, July)

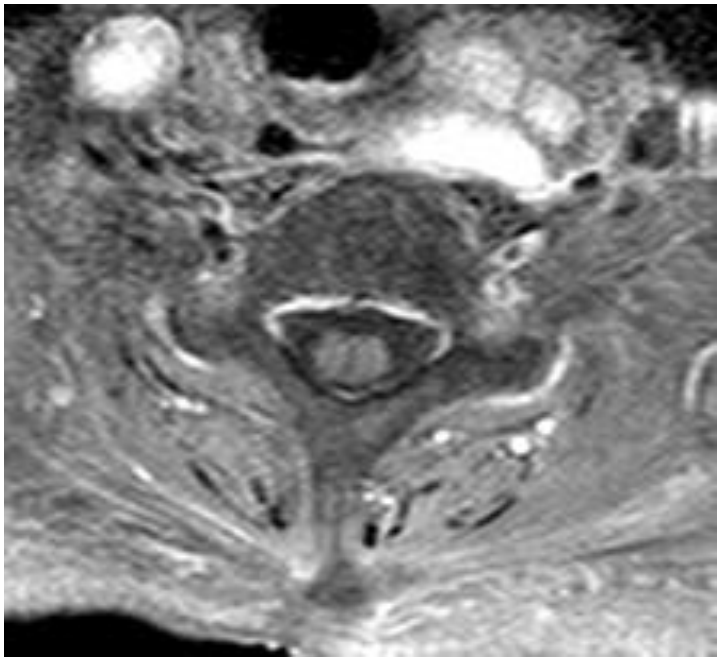


1st MRI study (13, July)

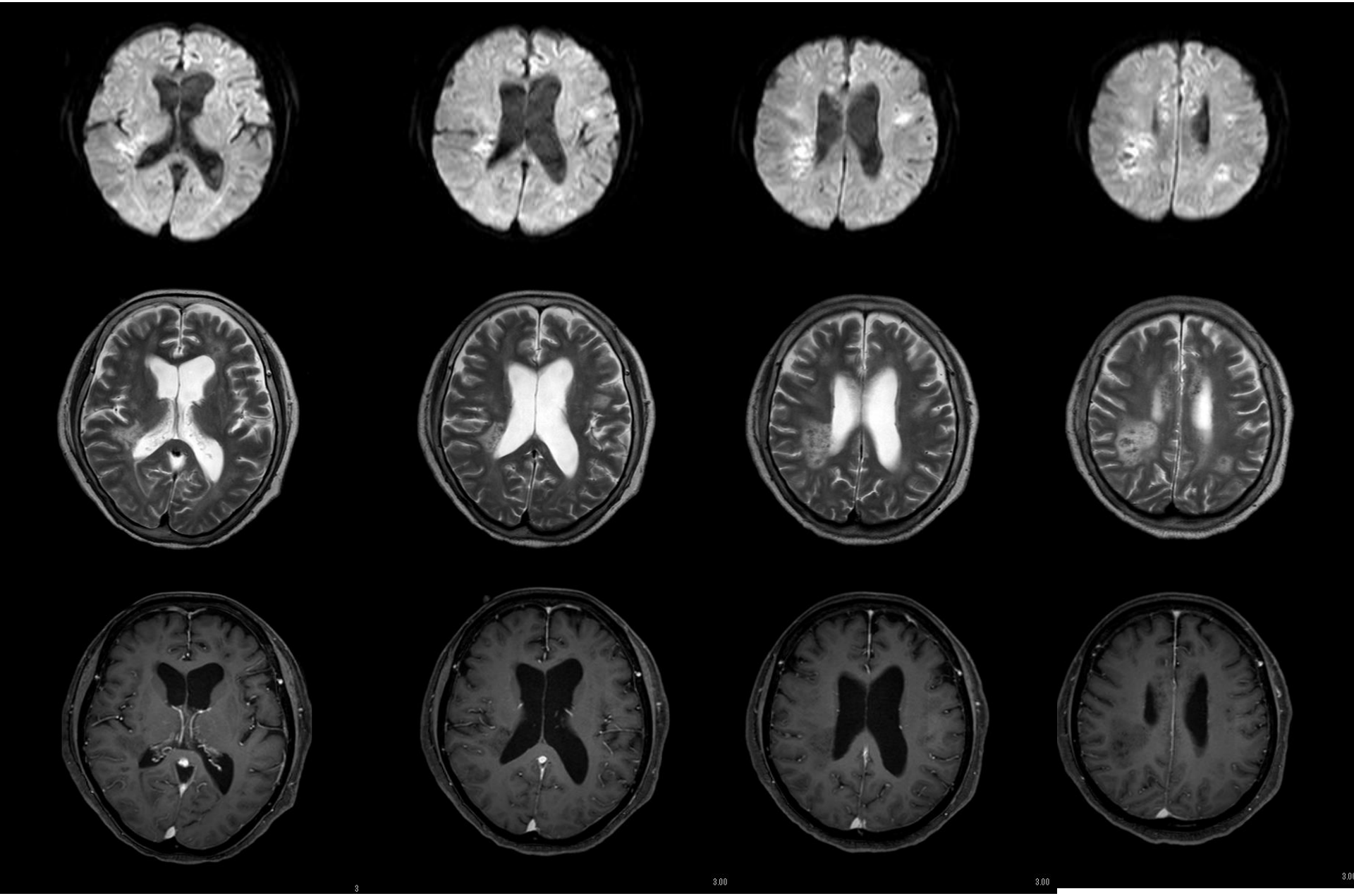


Spinal MRI (16, July)





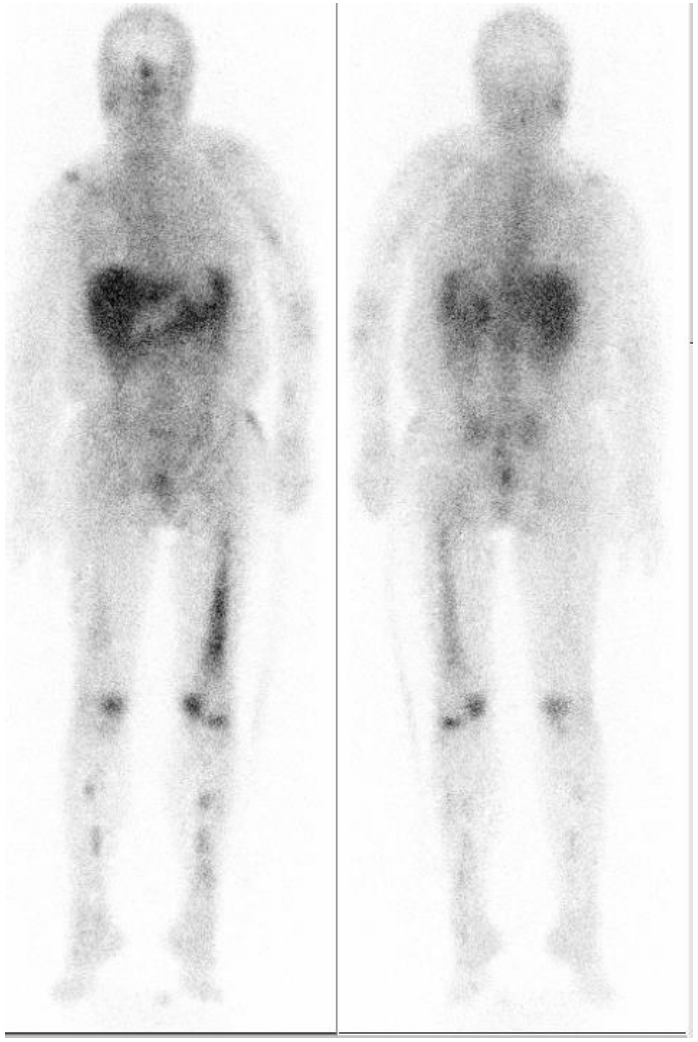
2nd MRI study (4, August)



Please make a diagnosis !

Sorry, hidden data.

LDH: 450 U/l (119-229)

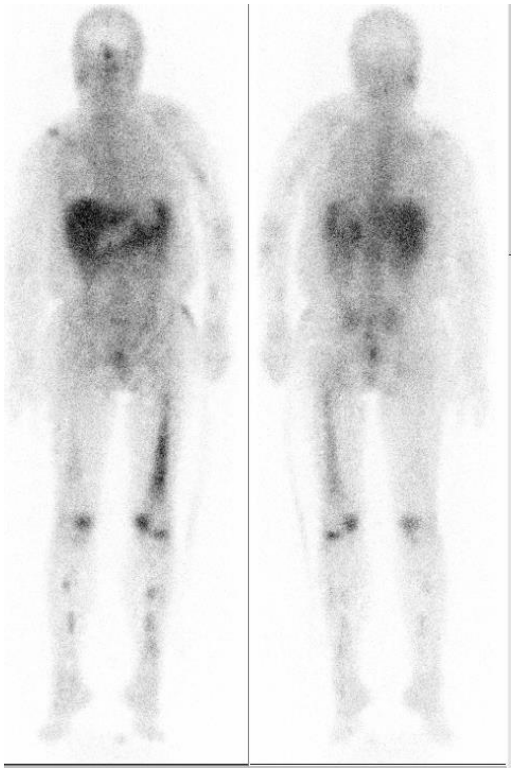


Ga Scintigraphy

Answer

***Intravascular Lymphomatosis* (B-cell lymphoma)**

- Bone marrow biopsy enabled us to diagnose the IVL.



Ga Scintigraphy

Intravascular Lymphomatosis (IVL)

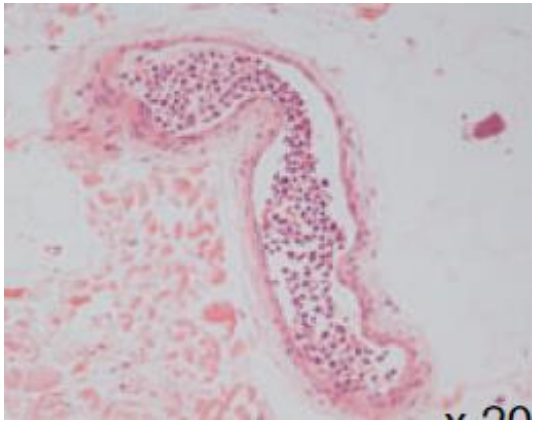
- Intravascular large B-cell lymphoma (IVL) is a rare type of extranodal lymphoma with an aggressive clinical course characterized by the proliferation of lymphoma cells within the lumen of small vessels. CD20, which is endothelial marker, is frequently positive.

- The central nervous system (CNS) is frequently involved and neurological symptoms were noted in 25% of the patients on initial diagnosis.

- Typical clinical symptoms are fever and neurological manifestations.

- Age: 5th through 7th decade

- Diagnosis: Random skin biopsy is useful.



Osborn AG. Diagnostic Imaging Brain.
Kawai N et al. Case Rep Oncol. 2012;5:339–346.
Matsue K et al. Eur. J. of haematol. 2007;80:236-244.

Intravascular Lymphomatosis (IVL)

Our case

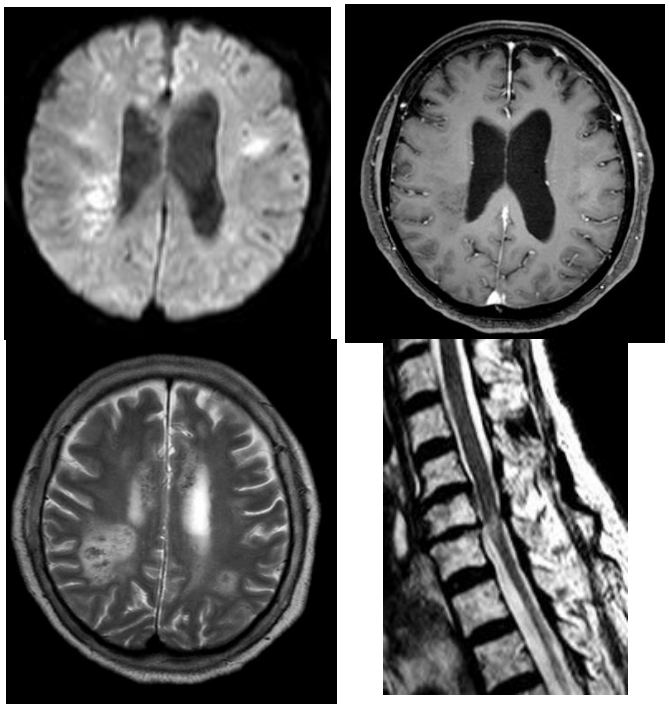


Image Finding

- **Infarctlike lesions**

Typically, multiple infarct lesions occasionally without contrast enhancement due to small vessels' occlusion by lymphoma cells. Hemorrhage is occasionally seen.

- **Non specific white matter lesions**

T2WI high lesions in periventricular area due to small vessels' occlusion of tumor cells as well. Rarely spinal lesions.

Maria GP et al. Neurol Sci. 2010;15;31:793-797.
Martin-Duverneuil N et al. Neuroradiology. 2002;44(9):749-754.
Monika S et al. J Neurol. 2008;255:1590–1592.
Yamamoto A et al. AJNR Am J Neuroradiol. 2012;33:292-296.

Intravascular Lymphomatosis (IVL)

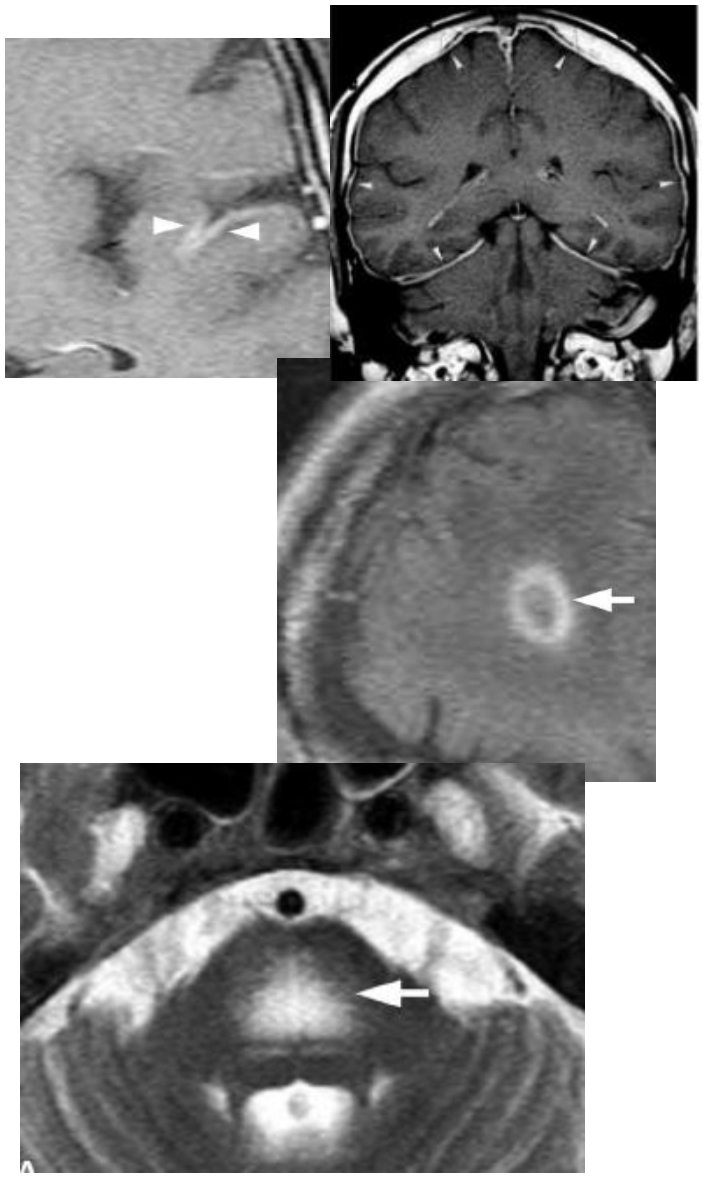


Image Finding

- **Meningeal Enhancement**

Pial/dural enhancement is seen. Meningeal inflammatory reaction with lymphoma cells. It suggest extravascular invasion.

- **Mass like lesions**

Enhanced lesions is occasionally seen. Extravascular spread of lymphoma cells with inflammatory change in the vessel wall and surrounding parenchyma.

- **T2WI high intensity lesion in the Pons**

T2WI high intensity lesion similar to osmolytic demyelination due to venous congestion.

Maria GP et al. Neurol Sci. 2010;15;31:793-797.
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Thank you for your attention.