

Recurrent chorea due to diabetic striatopathy : A case report

Ju Kang Lee, M.D., Ph.D.1, Oh Kyung Lim, M.D., Ph.D.1, Ki Deok Park, M.D., Ph.D.1, Gyu seok Oh, M.D.1, Ji young Kim, M.D.1, Ha eun Na, M.D.1
1 Department of Rehabilitation Medicine, Gil Medical Center, Gachon University College of Medicine, Incheon, Republic of Korea

Introduction

Diabetic striatopathy

- Hyperglycemic condition with chorea/ballism
- Striatal hyperdensity on computed tomography(CT) or hyperintensity on T1-weighted magnetic resonance imaging (MRI)

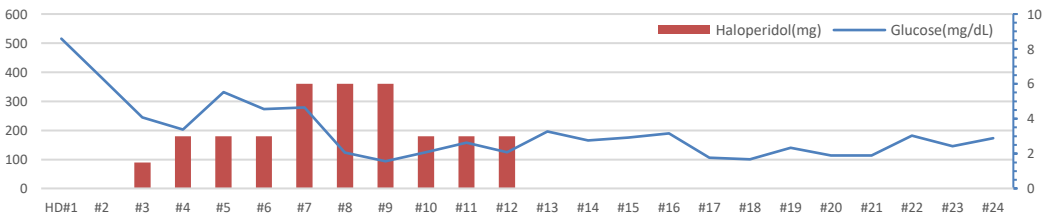
Case

- ✓ A 77-year-old woman presented with a 2-day history of choreiform movement of left extremities after she was admitted with hyperglycemic condition.
- ✓ She was not diagnosed with diabetes mellitus before admission.
- ✓ Initial glucose : 515mg/dL, HbA1c : 16.2%
- ✓ Past history : Essential hypertension, Cerebellar hemorrhage
- ✓ Mental status : nearly alert
- ✓ MMT : Right extremities - Good grade
Left extremities - NC due to chorea

Treatment & Progress

- For glycemic control, insulin therapy was started. (HD#1-HD#24)
- We also focused on hydration and correction of electrolyte imbalance.
- Haloperidol was used as an anti-chorea medication. (HD#3-HD#12)
- Choreiform movement was markedly improved after taking haloperidol.
- Choreiform movement of left extremities was nearly resolved. (HD#24)
- Two weeks later, she was admitted with recurrence of chorea.
- Before recurrence of chorea, glycemic control was appropriate.

Graph 1. Progress of choreiform movement



Choreiform movement	HD #1 -HD#2	HD#3 -HD#6	HD#7 -HD#9	HD#10 -HD#12	HD#13 -HD#21	HD#22 -HD#24
Number/min	30-35	20-25	15-20	15-20	5-10	3-5
Location	Neck U/Ex L/Ex	Neck U/Ex L/Ex	U/Ex L/Ex	Elbow, Wrist, Hand Knee, Ankle	Elbow, Wrist, Hand	Hand

- However, oral hydration was not supplied properly after discharge.
- After 3 days of oral and intravenous hydration, her choreiform movement started to be improved.
- Involuntary movement, except for mild hand and ankle movement, was nearly resolved after 1 week.

Imaging study

Figure 1. Brain CT(A axial and B coronal) showed high attenuation in right basal ganglia. No abnormal finding was detected in previous CT scan (C axial and D coronal) image which was taken 7 months earlier.

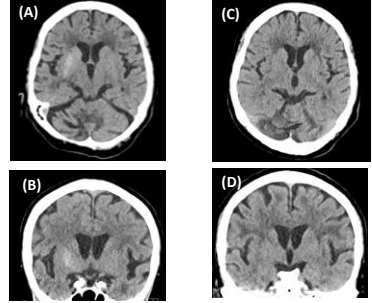
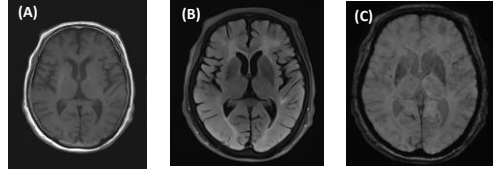


Figure 2. T1 weighted MRI(A) showed high signal in right basal ganglia, which was not detected in left side. T2 axial(B) and FLAIR(C) showed no significant abnormality in right basal ganglia.



Laboratory findings

Table 1. Laboratory findings

serum	Normal range	HD#1	HD#19	Readmission
Glucose (mg/dL)	70-100	482 ▲	120	174
Ketone (umol/L)	28-120	2967 ▲	217 ▲	-
BUN (mg/dL)	8-22	29.1 ▲	8.7	21.3 ▲
Osmolarity (mosm/kg)	289-308	304	283	-
HbA1c (%)	3.9-6.1	16.2 ▲	-	-

Conclusion

- CT and MRI are good imaging modalities to detect striatal lesions of diabetic striatopathy.
- In this case, treatment of diabetic striatopathy with glycemic control and medication of anti-psychotics was not sufficient.
- Not only glycemic control and medication of anti-psychotics, but also hydration was important to resolve choreiform movement.