

腸病毒重症案例分享

台中榮民總醫院兒童醫學部

兒童加護中心&兒童心臟科

林明志醫師

Basic Data

- 盧小妹
- Age: 11-month-old
- Gender: female
- BW 11 kg
- Height 71 cm

Chief Complaint

- Referred from a regional hospital due to frequent myoclonic jerks after HFMD

Present Illness

- HFMD with fever since Nov. 28, 2011
- Admitted to a regional hosp.
- Myoclonic jerks with lower limbs weakness noted since the night of Nov. 30, 2011
- Referred to TCVGH under the impression of EV crisis

Physical examinations

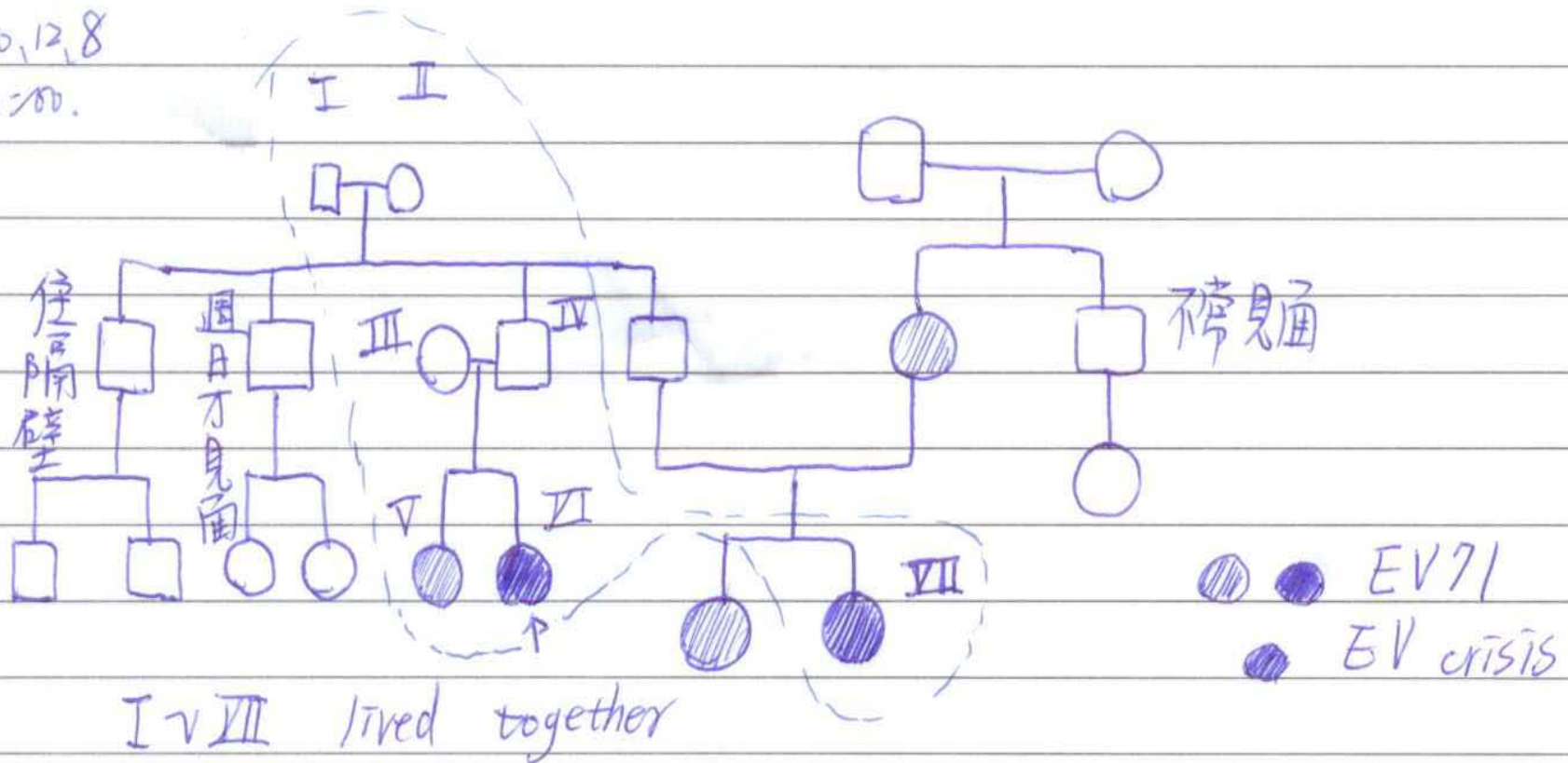
- Appearance: ill-looking, poor activity
- HR 105/min, BP 122/52, RR 40/min
- Herpangina, small vesicles over palmer sides of hands and feet
- No heart murmur, clear breathing sound
- Perfusion: normal
- Muscle power: decreased in lower limbs

Lab Data

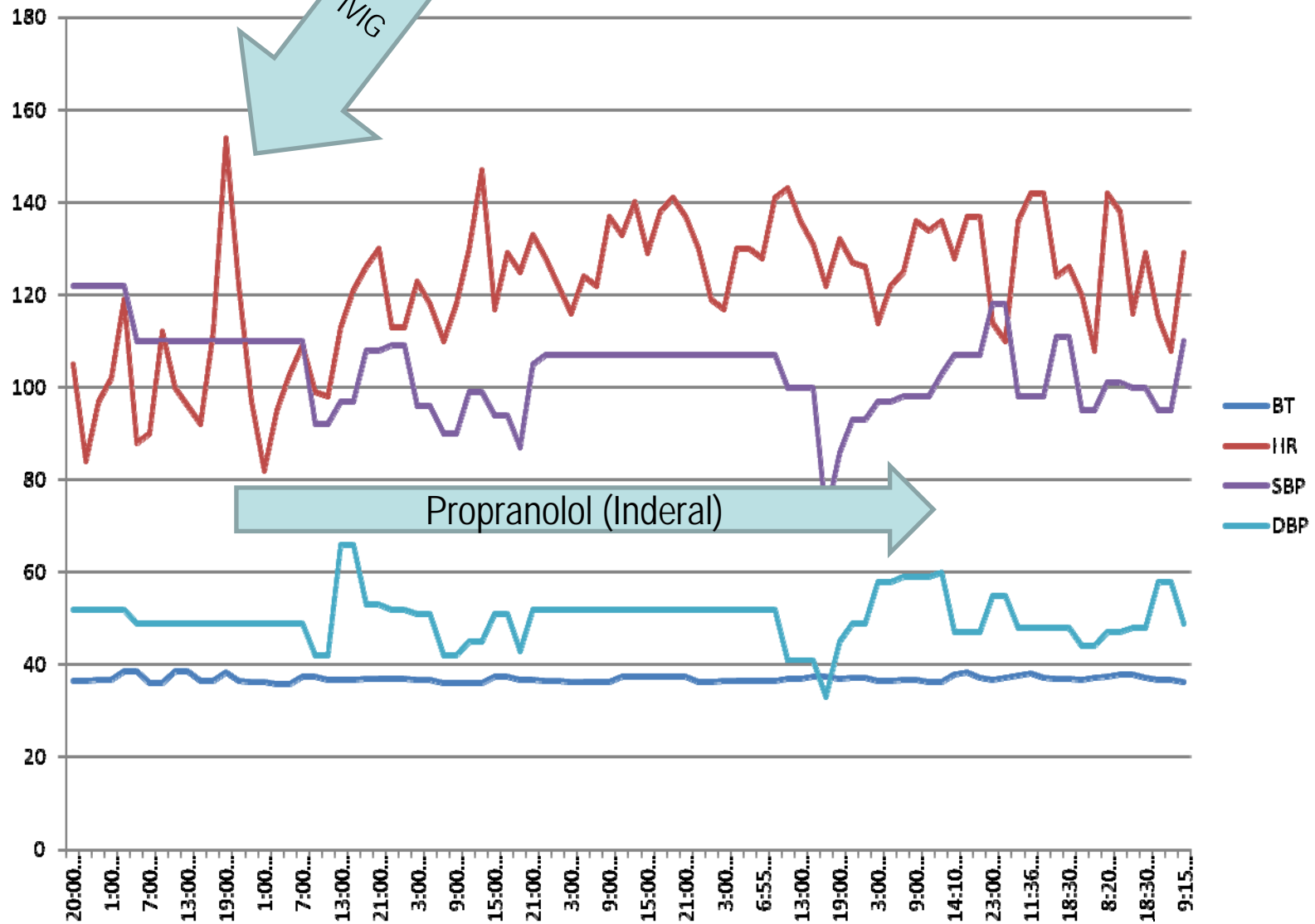
- WBC 28900/cumm, Hgb 11.7 mg/dL, Plt 553000 / cumm, N/L 84/9
- CK 63 U/I, CKMB 17 U/I
- CRP 0.60 mg/dL
- Glucose 129 mg/dL
- BUN/Cr 7/0.1 mg/dL
- Na/K/Cl/Ca 139/3.8/107/9.2 mg/dL

Family Cluster

100, 12, 8
12:00.

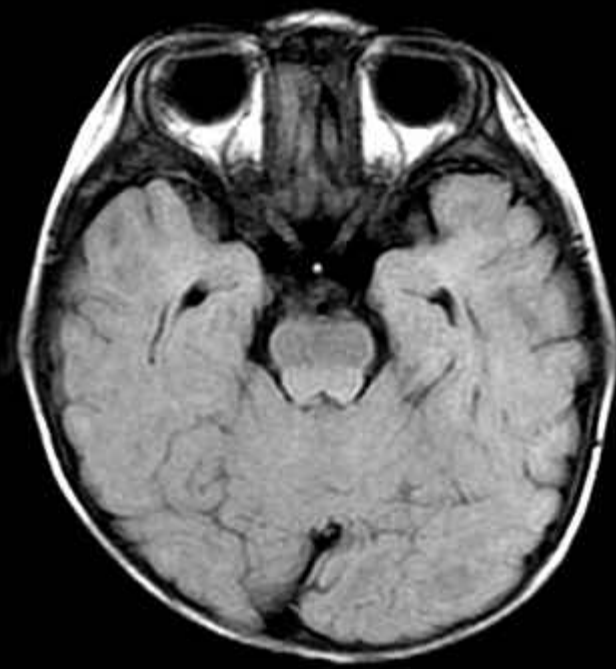
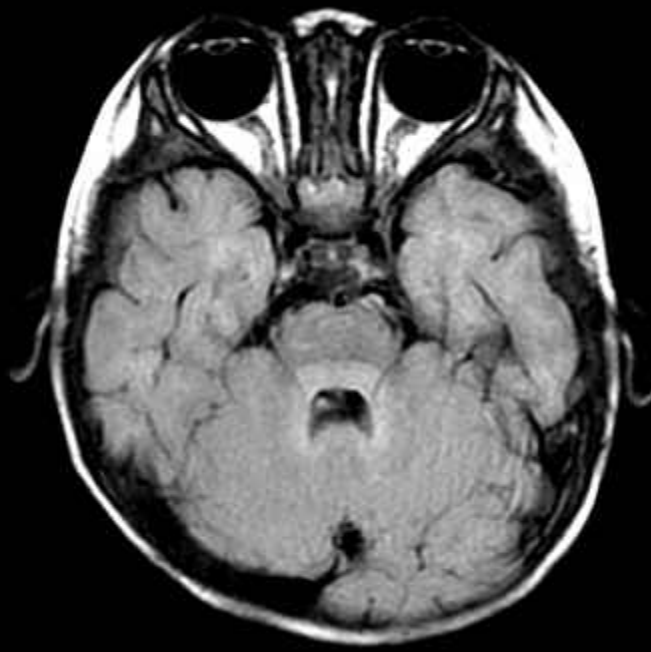
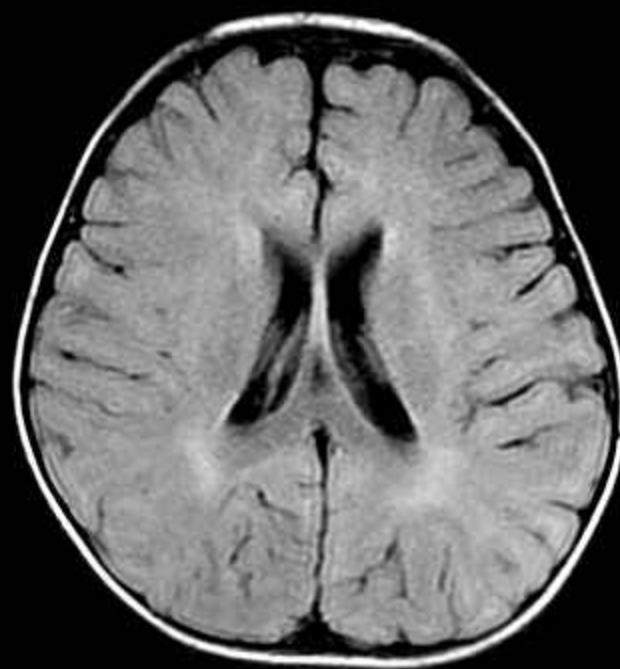
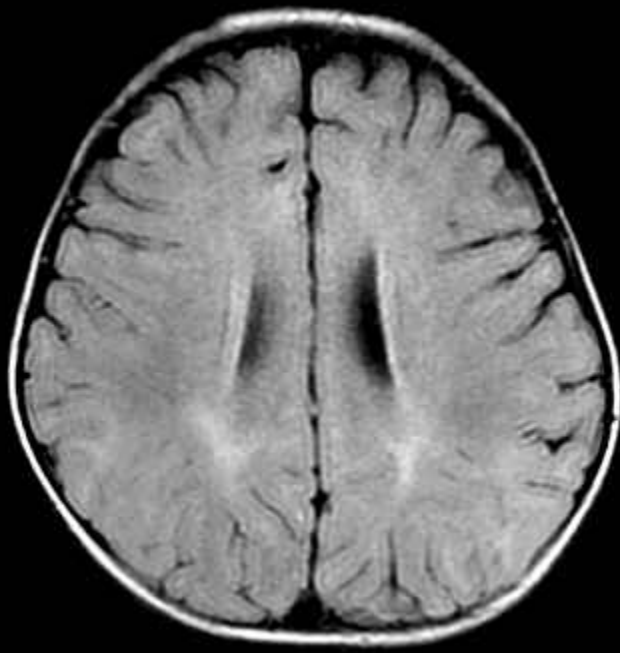


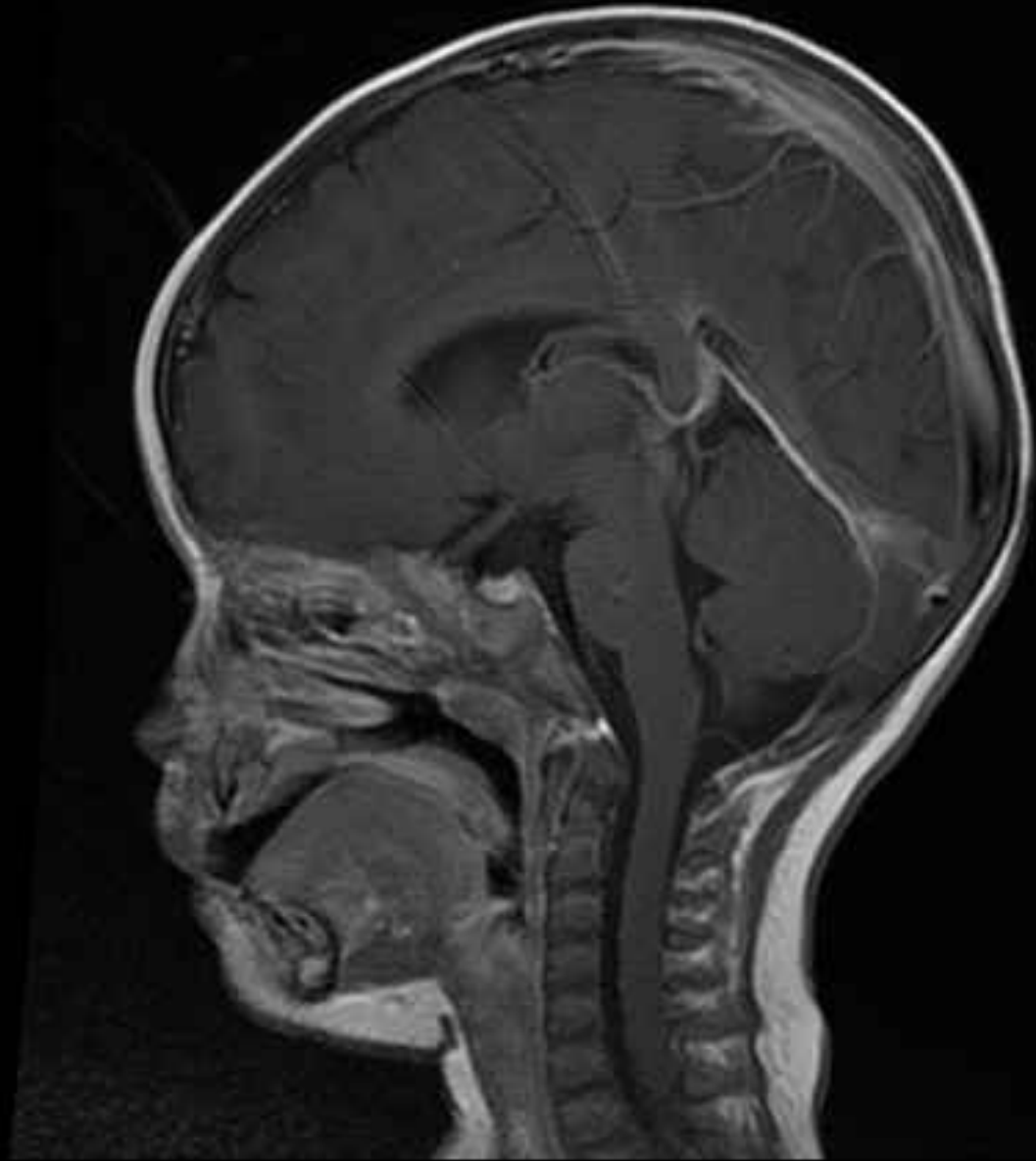
Hospital Course



Hospital Course

- Persistent lower limbs weakness, poor activity and slurred speech after transferring to the ordinary ward
- Brain MRI arranged on Dec. 6, 2011 (the 6th day of admission)





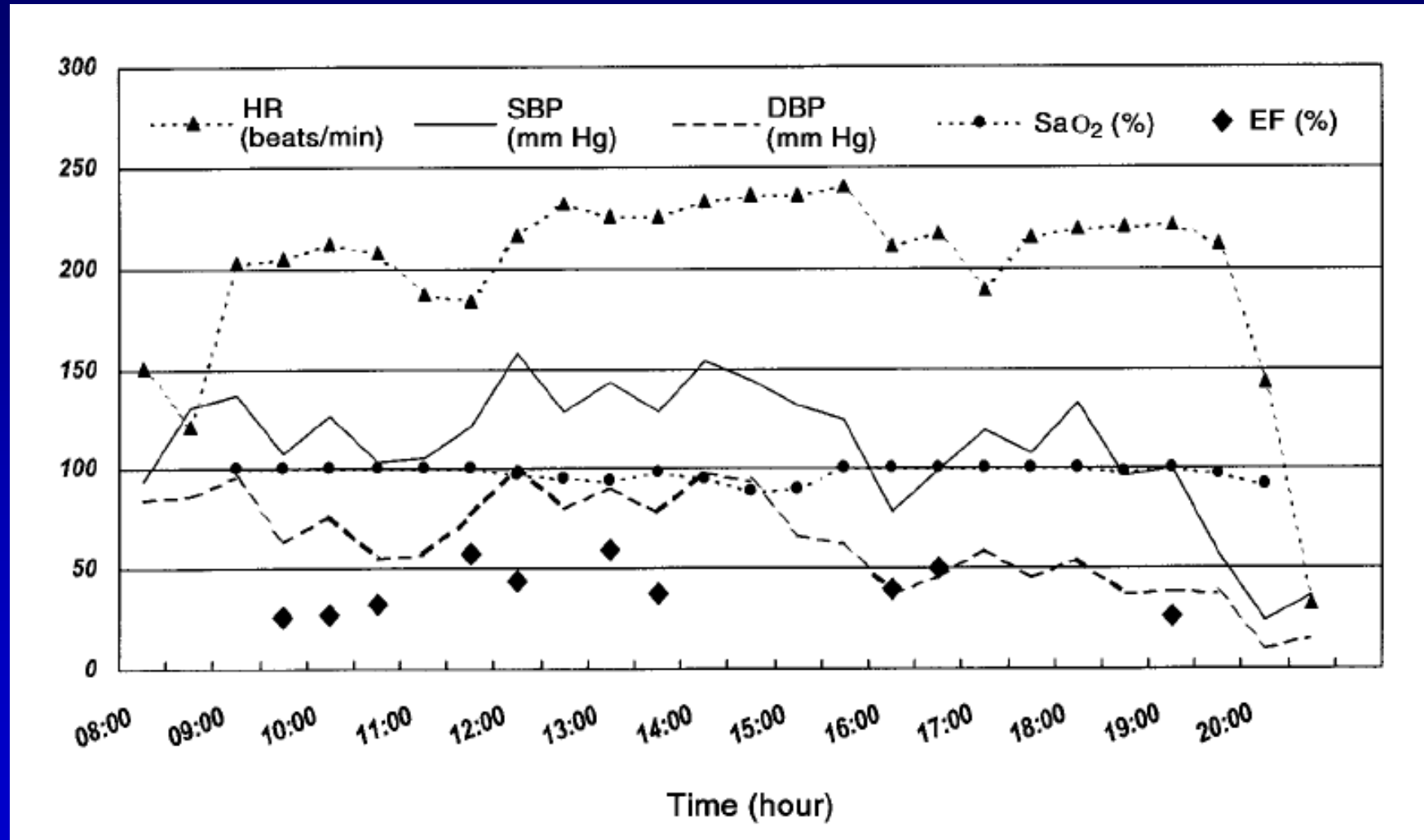
Hospital Course

- Trying to walk since Dec. 8, 2011 (the 8th day of admission)
- Activity recovered since Dec. 9, 2011 (the 9th day of admission)
- MBD at the 10th day of admission

Virology Report

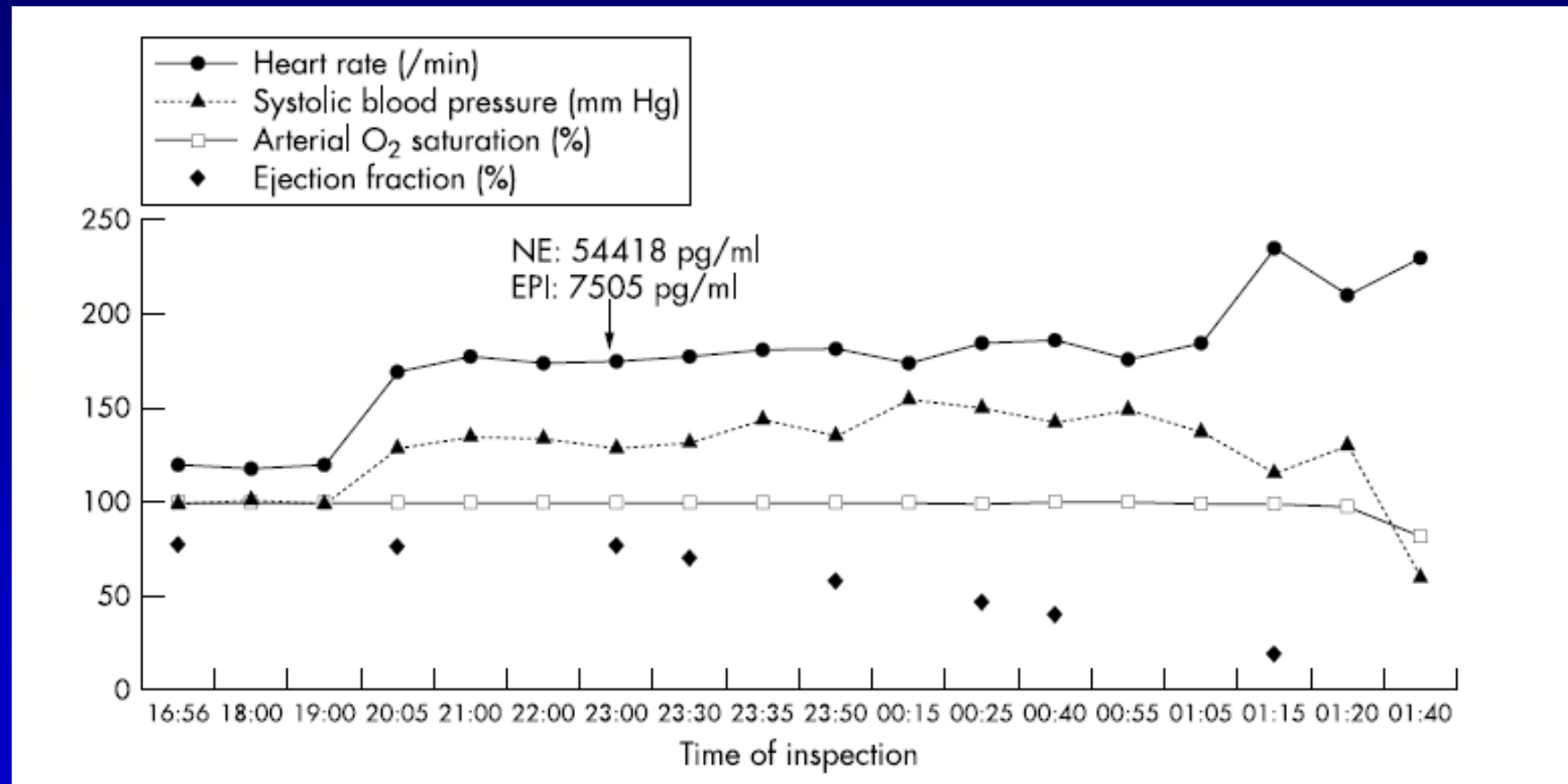
- Enterovirus type 71 isolated

Discussion



Huang et al. Clin Infect Dis. 2002 Apr 1;34(7):1020-4

Discussion



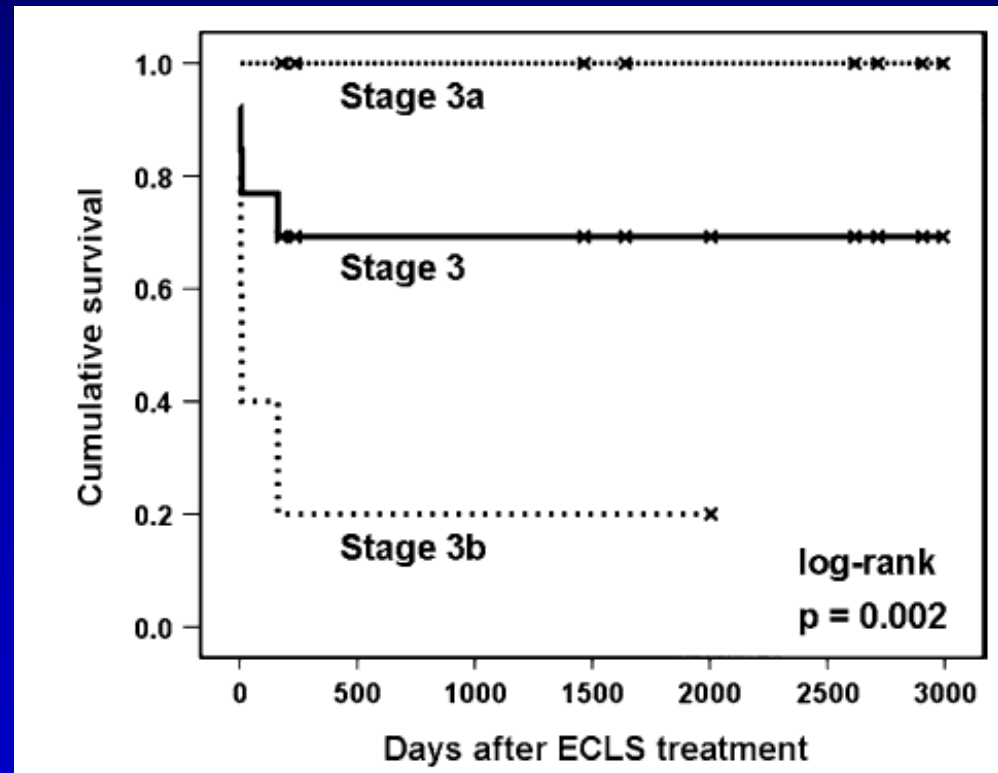
Fu et al. Arch Dis Child. 2004 Apr;89(4):368-73.

EV crisis bundle care (VGHTC)

- Stage I HFMD/herpangina
 - Symptomatic Tx.
- Stage II CNS involvement (jerks, weakness.....)
 - PICU admission, EKG monitor, setting Arterial-Line
 - IVIG and propranolol if tachycardia
- Stage IIIa HTN / Pul. Edema
 - Milrinone if low cardiac output
 - ECMO standby
 - Intubation (optional)
- Stage IIIb Hypotension
 - Early ECMO
 - Inotropic agents? (optional)
- Stage IV convalescence
 - rehabilitation

Outcome of VGHTC

- Survival rate
 - 30% (1998~2000)
 - 77% (2000~2008)



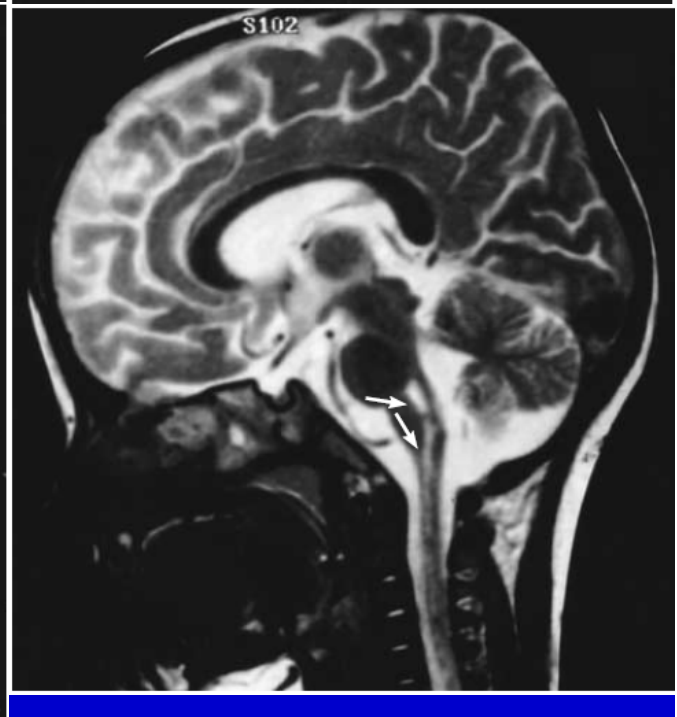
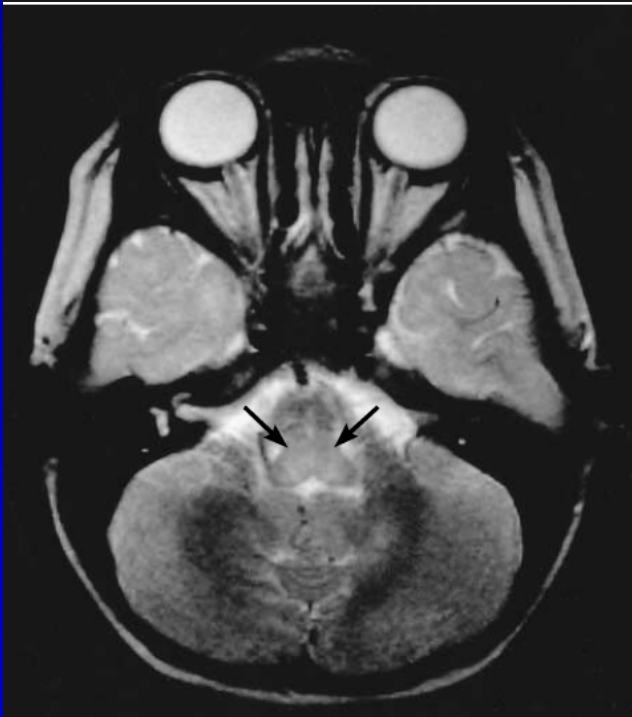
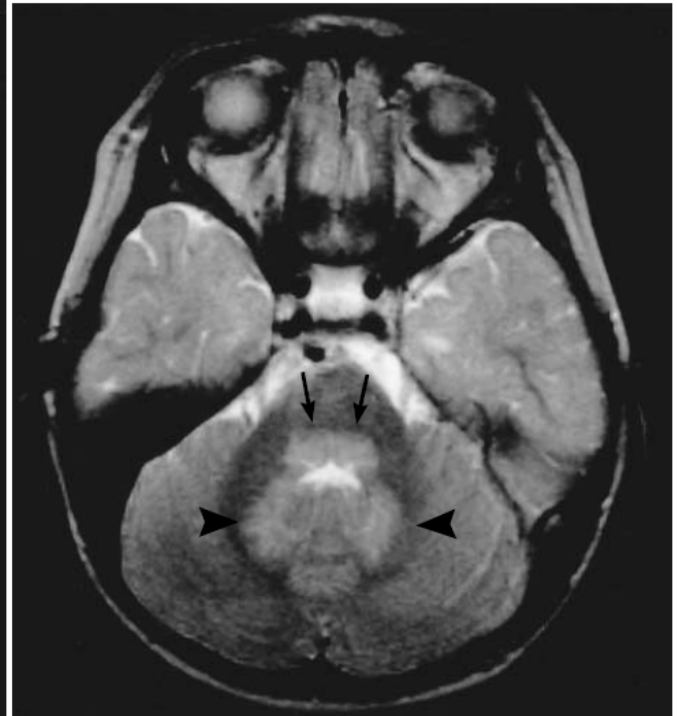
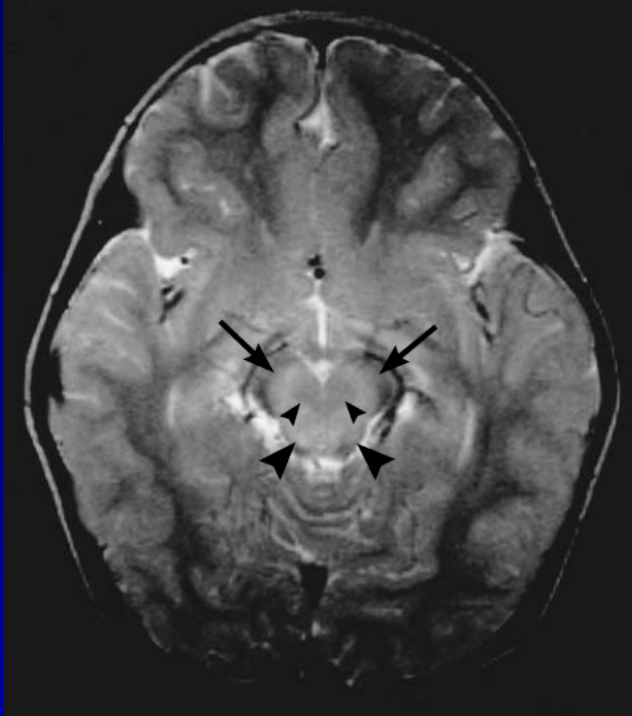
Jan et al. Intensive Care Med. 2010 Mar;36(3):520-7.

enterovirus 71 transmission rate to household contacts

- Overall enterovirus 71 transmission rate, 52% (176/339)
 - 84% for siblings (70/83)
 - 83%, cousins (19/23)
 - 41%, parents (72/175)
 - 28%, grandparents (10/36)
 - 26%, uncles and aunts (5/19)

Chang et al. JAMA. 2004 Jan 14;291(2):222-7.

Neurologic complications in children with enterovirus 71 infection



Huang et al. N Engl J Med. 1999 Sep 23;341(13):936-42.

Neurologic complications

- Lethargy, sleepiness or coma
- seizure attacks, ataxia
- cranial nerve palsies
 - such as abducens palsy, facial palsy, dysphagia, upward gaze and nystagmus.
- Subtle symptoms of increased sympathetic tone
 - such as insomnia, profuse sweating, paralytic ileus, neurogenic bladder, panic or increased startle reflex
- Polio-like , 50% long-term sequela

Chang. Pediatr Neonatol. 2008 Aug;49(4):103-12.

Summary

- Staged approach for EV crisis
- Early recognition, the key to survival
- 轉診聯絡方式
 - 兒童醫學部醫療總醫師 (04-23592525 ext 8046 8146)
 - 兒童加護中心 林明志醫師 (0975351218)
 - 兒科急診

感谢主
感谢林医生
谢谢你守护我的心脏

