A case of young infant HPeV1 infection with intraventricular hemorrhage

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<Physical finding>
HT: 60cm (+1.0 SD), BW: 6.1kg (+0.9 SD)
BT: 38.1°C, HR: 205bpm, BP: 100/70mmHg, RR: 44/min, SpO2: 98%
General condition: not doing well, irritability(+)
Head: fontanelle open flat, Neck stiffness(+)
Throat: slightly injected,
LNS: not palpable,
Abdomen: soft, mass(-), BS normal
Skin: rash on face and perineum
Pupils: 3mm/3mm, reflex +/-, Nystgmus:(-)
Babinski: -/- Chaddock: -/

<Blood gas>
pH 7.400  Alb 3.6 g/dl
pCO2 32.7 mmHg Tbl 0.9 mg/dl
HCO3 19.8 mmol/l  AST 976 I/U
B.E 3.8  ALT 517 I/U
Lac 1.9 mmol/l  LDH 2387 I/U

<Coagulability>
APTT 44.5 sec  CRP 2.3 mg/dl
PT(Act) 48 %  PCT 28.6 ng/dl
PT(INR) 1.49

<CBC>
WBC 12200 /µl  Cre 0.26 mg/dl
Neut 25 %  Glu 91 mg/dl
Lymph 71 %  Ferritin 212 ng/dl
RBC 358 10⁶ /µl  IL2R 2074 U/ml
Hb 9.7 g/dl  PIVKA II 37 mAU/ml
Plt 34.0 10⁴ /µl  proBNP 5522 pg/ml

<CTCI>
CTR: 56%, no abnormal findings
(Heart US) EF: 70%, no valvular regurgitation, no pericardial effusion

<Discussion>
HPeVs are most commonly associated with mild gastrointestinal or respiratory symptoms. HPeV3 has been associated with more-severe disease, such as neonatal sepsis and meningitis.[1] Compared with HPeV3, HPeV1 symptoms are relatively mild and there are few CNS symptoms. There is no report of HPeV1 that caused cerebral hemorrhage so far. This case is important that it can merge intraventricular hemorrhage even with HPeV1 infection.[2]

This case had clinical symptoms of sepsis with evaluation of DIC score and met criteria for SIRS. It seemed that vascular endothelial damage was caused due to cytokine storm, therefore LDH and IL2R, PCT were elevated, and might be relevant to the Intraventricular haemorrhage.[3]

In case of young infant with clinical symptoms of sepsis, it is necessary to rule out HPeV infections. And consideration the possibility of cerebral hemorrhage is important not only HPeV3 infection but HPeV1.

References