Background and aims There is no established treatment method for giant cell hepatitis with autoimmune hemolytic anaemia (GCH-AIHA) in early childhood. This study was designed to investigate whether repeated high-dose gamma globulin administration was effective for a case of GCH-AIHA in early childhood.

Methods The subject was a 10-month-old girl. At 6 months of age, examination for poor activity levels revealed that she was anaemic with elevated transaminase levels. She was then hospitalised at another hospital. Bone marrow testing ruled out the presence of any malignant diseases. She received blood transfusion and was administered steroids, but her condition did not improve; thus, she was transferred and hospitalised at our hospital. Upon admission, her liver was palpable at two finger breadths and her spleen was palpable at one finger breadth. Blood test results were as follows: haemoglobin, 7.0 g/dL; alanine transaminase, 354 U/L; direct bilirubin, 9.7 mg/dL; direct and indirect Coombs tests, positive and antinuclear antibodies, below 40×; and anti-liver-kidney microsomal-1 antibodies, negative. Liver biopsy confirmed giant cell hepatitis. Mild inflammatory cell infiltration was observed, although fibrosis was extremely mild. Considering her clinical course, the patient was diagnosed with GCH-AIHA. After steroid pulse therapy, administration of prednisolone and cyclosporine was continued but transaminase levels did not improve. Therefore, high-dose (2 g/kg) gamma globulin was administered once per month for a total of four times.

Results The patient’s anaemia improved and her transaminase levels dropped.

Conclusions Repeated high-dose gamma globulin administration is effective for GCH-AIHA.