

**Supplementary Table 1 Preoperative conditions of the patient.**

<b>Preoperative conditions</b>	<b>value</b>
<b>Age (year)</b>	14
<b>Sex</b>	male
<b>Temperature (°C)</b>	36.3
<b>Pulse (bpm)</b>	100
<b>Respiration Rate</b>	20
<b>Blood pressure (mmHg)</b>	100/71
<b>Infectious disease</b>	No
<b>Blood transfusion history</b>	No
<b>Previous illnesses</b>	
Growth delay	
Moderate protein-energy malnutrition	
<b>Operation history</b>	No
<b>Admission history</b>	No
<b>Family medical history</b>	No
<b>Height and weight</b>	
Height (cm)	148.0
Weight (kg)	35.0
<b>BMI (kg/m<sup>2</sup>)</b>	15.98
<b>Blood cell test</b>	
White blood cells (range 4.10-11.00× 10 <sup>9</sup> /L)	2.27× 10 <sup>9</sup> /L
Neutrophils (range 1.80-8.30× 10 <sup>9</sup> /L)	0.88× 10 <sup>9</sup> /L
Lymphocytes (range 1.20-3.80× 10 <sup>9</sup> /L)	1.18× 10 <sup>9</sup> /L
Monocytes (range 0.14-0.74× 10 <sup>9</sup> /L)	0.17× 10 <sup>9</sup> /L
Eosinophils (range 0.00-0.68× 10 <sup>9</sup> /L)	0.03× 10 <sup>9</sup> /L
Basophils (range 0.00-0.07× 10 <sup>9</sup> /L)	0.01× 10 <sup>9</sup> /L
Red blood cells (range 4.50-5.90× 10 <sup>12</sup> /L)	3.93× 10 <sup>12</sup> /L
Platelets (range 150-407× 10 <sup>9</sup> /L)	40× 10 <sup>9</sup> /L

Hemoglobin (range 129-172 g/L) 109 g/L

**Tumor markers test**

Carcinoembryonic antigen (range 0.00-3.40 ng/mL) <0.30 ng/mL

Carbohydrate antigen 125 (range 0.00-35.00 u/mL) 9.26 u/mL

Carbohydrate antigen 199 (range 0.00-27.00 u/mL) 2.88 u/mL

Alpha-fetoprotein (range 0.00-7.00 ng/mL) 1.55 ng/mL

**Spleen size**

Computed tomography (length×width) 21.9 cm×9.1 cm

Abdominal ultrasonographic (length×width) 19.1 cm×8.5 cm

**Spleen Index**

83 cm<sup>2</sup>

**Tumor size**

Computed tomography (length×width) 9.3 cm×7.8 cm

Abdominal ultrasonographic (length×width) 7.4 cm×6.8 cm

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**Supplementary Table 2 Intraoperative conditions of the patient.**

<b>Intraoperative conditions</b>	<b>value</b>
<b>The operation time (min)</b>	240
<b>The intraoperative transfusion (ml)</b> Autologous blood transfusion	300
<b>The intraoperative blood loss (ml)</b>	50
<b>The number of lymph nodes dissected</b> Splenic lymph nodes	8
<b>Intraoperative complications</b>	No

**Supplementary Table 3 Clinical data of children with LCA.**

Cases	Age (yr)	Sex	Clinical presentation	Anemia	Decreased PLT	Pancytopenia	Imaging results	Tumor types	Biomarkers	Treatment and prognosis
1 <sup>[1]</sup>	1	Female	Splenomegaly, fever	Yes	Yes	No	MRI: high density	Multiple	Factor VIII, CD31, CD34, CD68 <sup>+++</sup> +	Splenectomy, No recurrence
2 <sup>[2]</sup>	2	Male	Splenomegaly	Yes	Yes	No	CT: low-density shadows, MRI: mild progressive contrast enhancement, Ultrasound: low-density shadows	Multiple	Unknown	Splenectomy
3 <sup>[3]</sup>	11	Female	Abdominal symptoms	No	No	No	MRI: T1 hypointense signal, T2 hyperintense signal	Solitary	CD31, CD68, CD34 <sup>+++</sup> , CD8 <sup>-</sup> , Ki67 (2%)	Splenectomy
4 <sup>[4]</sup>	12	Male	Splenomegaly	Unknown	Unknown	Unknown	Ultrasound: low-density	Multiple	Unknown	Splenectomy
5 <sup>[5]</sup>	15	Male	Abdominal symptoms	No	No	No	Enhanced CT: high density in early arterial phase, low density in portal venous phase	Solitary	Unknown	Splenectomy
6 <sup>[6]</sup>	26 days	Male	Vomiting, Abdominal symptoms	No	Yes	No	CT: low echo MRI: T1 and T2 hypointense signal	Multiple	ERG, CD68 and CD21, CD8 <sup>+++</sup> , CD34 <sup>-</sup> ,	Conservative, No recurrence
7 <sup>[7]</sup>	2	Male	Purpura, Splenomegaly	Yes	No	No	Unknown	Unknown	Unknown	Splenectomy, No recurrence

8 <sup>[8]</sup>	11	Male	Splenomegaly, Abdominal symptoms, Anemia	Yes	Yes	No	Ultrasound: low echoes	Multiple	CD68, CD31, CD34 <sup>+++</sup>	Splenectomy
9 <sup>[9]</sup>	9	Famel	Abdominal symptoms	Unknown	Unknown	Unknown	CT: mixed density of the spleen, central patchy high-density Ultrasound: heterogeneous echoes	Solitary	CD31, CD34 <sup>+</sup> , ERG, EMA, Vim <sup>++</sup> , Ki-67 <sup>+</sup>	Splenectomy
10 <sup>[10]</sup>	3	Famel	Asymptomatic	Yes	No	No	CT: low-density Ultrasound: slightly stronger echoic	Multiple	Vimentin/CD31, ERG, CD34, CD68, CD163, CD21 <sup>+++</sup> , ++++, Ki67 <sup>+</sup>	Splenectomy, No recurrence
11 <sup>[11]</sup>	9	Male	Abdominal symptoms, Splenomegaly	Unknown	Unknown	Unknown	MRI: T1 and T2 slightly prolonged/equal	Solitary	CD31, CD34 <sup>++</sup> , Ki-67, Vimentin, CD68 <sup>+++</sup>	Unknown
12 <sup>[12]</sup>	7	Famel	Asymptomatic	No	No	No	MRI: slightly long T1, isointense T2	Solitary	CD31, CD34, Ki67 <sup>+++</sup>	Splenectomy, No recurrence
Our case	14	Male	Abdominal symptoms	Yes	Yes	Yes	CT: low-density, Enhanced CT: mixed density of the spleen, central patchy slightly high-density Ultrasound: heterogeneous echoes	Multiple	CD31, CD34, CD68 <sup>+++</sup> , Ki67(1%), CD8 <sup>-</sup> ,	Splenectomy, No recurrence

Note: CT: computed Tomography; MRI: magnetic resonance imaging;

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**Supplementary Table 4 Postoperative recovery of the patient.**

<b>Postoperative recovery</b>	<b>value</b>
<b>Postoperative early complications</b>	
Fever	
<b>Postoperative late complications</b>	
	No
<b>Time to soft diet (d)</b>	1
<b>Hospital day after surgery (d)</b>	8
<b>Pain score at postoperative day</b>	2
<b>Blood cell test (after 1 month)</b>	
White blood cells (range 4.10-11.00× 10 <sup>9</sup> /L)	7.14× 10 <sup>9</sup> /L
Neutrophils (range 1.80-8.30× 10 <sup>9</sup> /L)	3.44× 10 <sup>9</sup> /L
Lymphocytes (range 1.20-3.80× 10 <sup>9</sup> /L)	1.36× 10 <sup>9</sup> /L
Monocytes (range 0.14-0.74× 10 <sup>9</sup> /L)	0.98× 10 <sup>9</sup> /L
Eosinophils (range 0.00-0.68× 10 <sup>9</sup> /L)	1.19× 10 <sup>9</sup> /L
Basophils (range 0.00-0.07× 10 <sup>9</sup> /L)	0.17× 10 <sup>9</sup> /L
Red blood cells (range 4.50-5.90× 10 <sup>12</sup> /L)	5.13× 10 <sup>12</sup> /L
Platelets (range 150-407× 10 <sup>9</sup> /L)	545× 10 <sup>9</sup> /L
Hemoglobin (range 129-172 g/L)	138 g/L
<b>Blood cell test (after 3 months)</b>	
White blood cells (range 4.10-11.00× 10 <sup>9</sup> /L)	11.1× 10 <sup>9</sup> /L
Neutrophils (range 1.80-8.30× 10 <sup>9</sup> /L)	4.39× 10 <sup>9</sup> /L
Lymphocytes (range 1.20-3.80× 10 <sup>9</sup> /L)	5.14× 10 <sup>9</sup> /L
Monocytes (range 0.14-0.74× 10 <sup>9</sup> /L)	0.84× 10 <sup>9</sup> /L
Eosinophils (range 0.00-0.68× 10 <sup>9</sup> /L)	0.66× 10 <sup>9</sup> /L
Basophils (range 0.00-0.07× 10 <sup>9</sup> /L)	0.08× 10 <sup>9</sup> /L
Red blood cells (range 4.50-5.90× 10 <sup>12</sup> /L)	5.20× 10 <sup>12</sup> /L
Platelets (range 150-407× 10 <sup>9</sup> /L)	185× 10 <sup>9</sup> /L
Hemoglobin (range 129-172 g/L)	139 g/L
<b>Weight (kg)</b>	
After 1 month	34.3
After 3 months	38.2
After 8 months	41.6
<b>Height (cm)</b>	
After 1 month	148.0
After 3 months	149.2

After 8 months	151.4
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**BMI (kg/m<sup>2</sup>)**

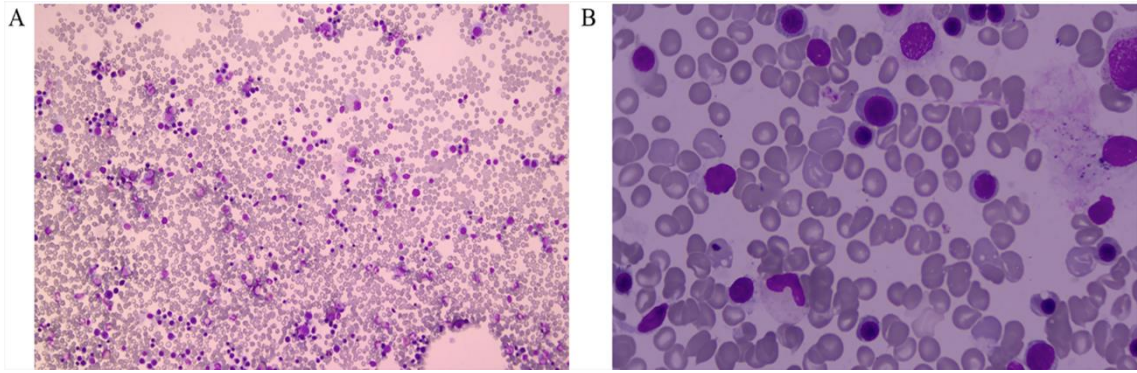
After 1 month	15.66
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After 3 months	17.16
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After 8 months	18.15
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Supplementary Figure 1 Blood system check (A) The blood smear from the peripheral blood showed that blood cell morphology was normal. (HE  $\times 100$ ). (B) The blood smear from the bone marrow aspiration showed that megakaryocytic series and erythrocytic series increased but granulocytic series decreased. (HE  $\times 100$ ).



Supplementary Figure 2 Postoperative CT (A,B,C) shown that no abnormal lesions were found in the surgical area.