

Table 4: Diagnostic Characteristics

Study ID	Patient presentation	Time to clinical onset of symptoms	Uric acid, Methemoglobin and SpO ₂ levels	Suspected Haemolysis	Laboratory values
Jung et al. (15)	Acute tachypnoea	~10 hrs	19.1 mg/dl, NR, 77%	Present	S.Cr 3.46 mg/dl, K ⁺ 3.7 mmol/L, Ca ²⁺ 14.6 mg/dl, Hb 8.1 g/dl, Haematocrit 24.9%
Bachmann et al.(22)	slight dyspnoea	24 hrs	NR, 5.1%, 80%	NR	NR
Raru et al. (24)	Dizziness, shortness of breath, weakness, Haematuria, tachycardia, mild respiratory Distress, and acute kidney injury	12 hrs	7.1 mg/dl, 11.9%, 75%	Present, Severe haemolytic anaemia	WBC 46.6 k/cumm, Hb 6.1 g/dL, K ⁺ 5.4 meq/L, S.Cr 1.32 mg/dl, Haptoglobin 26 mg/dl, CO 6.9%, Bilirubin 6.3 mg/dl, LDH 5103 u/l, hyperkalaemia
Cooling et al.(11)	Hypoxic, tachypnoea, and worsening anaemia	3 hrs	29.5 mg/dl, 16%,12 hr later increased to 23%, 70-80%	NR	Hb 57.9 g/dL, lactate 55 mmol/L , LDH 512,699 IU/L, acidosis (pH 7.2)
Ibrahim et	mildly cyanotic	After 1			Hb 6.6 g/dL, Leukocyte

al.(28)	and arterial blood appeared dark brown colour	day	10.7 mg/dl(Baseline), 9.80%, 60-65%	Present, Rasburicase and/or methylene blue-induced haemolysis was suspected.	6.8*10 ⁹ /L, LDH 359 IU/L, DB 0.58 mg/dL, TB 1.9 mg/dL
Reeves et al. (14)	worsening shortness of breath and a drop in haemoglobin concentration,	After 1 day	14.1 mg/dl, 14.50%, 75-80% on oxygen 15 L/min via non-rebreather mask.	Present	BUN conc. 74 mg/dL, S.Cr 4.05 mg/dL, Hb 8.3 g/dL,
Montgomery et al.(10)	concurrent bilateral pleural effusions and dyspnoea	6 hrs	13.3 mg/dl, 10.3%-14.6%, 70-80%	NR	Hb 7.7 mg/dL, haematocrit 30%.
Sleutel et al. (21)	Pt 1: dyspnoeic, hypoxia, and lethargy Pt 2: shortness of breath, tachycardia, hypovolemia, general weakness,	Pt 1: 48 hr Pt 2: 3 days	Pt 1: 10.2 Pt 2: low due to prior administration of Rasburicase, Pt 1:	Pt 1: NR Pt 2: Present, acute haemolysis with renal injury	Pt 1: S.Cr 2.2 mg/dl, WBC 103.4 k/uL Pt 2: Haematocrit 15.5%, Hb 5 g/dl, Oxygen content 5.6 ml/dl, RBC 1.62 m/uL, WBC 17.8 k/uL,

	syncope		16.2% Pt 2: 6.7%, Pt 1: NR Pt 2: 84%		
Sherwood et al.(5)	hypoxic	3 days	11.8 mg/dL [701.9 lmol/L], 9.5%, 82%	Present, massive intravascular haemolysis	K ⁺ 4.3 mmol/L, Ca ²⁺ 8.3 mg/dL, phosphorous 5.5 mg/dL, S.Cr 6.2 mg/dL, WBC 70.0 *10 ⁹ /L., eosinophils 10%, TB 6.4 mg/dL, IB 4.4 mg/dL, LDH 1829 U/L, and haptoglobin 9 mg/dL, Hb 8.0 mg/dL, Peripheral smear confirmed marked leucocytosis with predominately mature elements
Alessa et al. (26)	hypoxemia, acute shortness of breath, and pulmonary embolism	After 1 day	Hyperuric emia, 10.9%, 70%	NR	hyperkalaemia, hyperuricemia, hyperphosphatemia, elevated LDH levels, elevated troponin value
Oluwasanjo et al.(25)	dyspnoea, diaphoresis, chest discomfort, and light- headedness	48 hrs	35.69 μmol/l, 8.4%, 85%	Present	Hb 93 g/l, WBC count 77.9*10 ⁹ /l, lymphocytes 0 8%, S.Cr 73.37 μmol/l, TB 41.05 μmol/l, DB 6.84 μmol/l, haptoglobin ≤ 10 mg/l, LDH 864 u/l,

					A peripheral blood film showed irregularly contracted cells and retraction of haemoglobin from the red cell membrane. Heinz bodies were demonstrated on supravital staining with new methylene blue
Zhang et al. (30)	dark brown urine	2 days	13 mg/dl, 5.6%, NR	Present, resolved after one week of packed RBC transfusion	Hb 5.8 g/dl, LDH 1290 U/l, reticulocyte count 1.9%, TB 6.29 mg/dl and DB 0.28 mg/dl , His peripheral blood smear revealed numerous ‘blister’ cells and a few ‘bite’ cells
Roberts et al.(27)	Pt 1: hypoxic, Pt 2: severe tiredness	Pt 1: Next morning, Pt 2: 48 hr	Pt 1: 11.6 mg/dl, Pt 2: 16 mg/dl, Pt 1: 6.2%, Pt 2: 13%, Pt 1: 82%, Pt 2: 84%	Pt 1: Absent, Pt 2: Present, Haemolytic anaemia	Pt 1: LDH 922 U/L, K ⁺ 6.2 mmol/L, Ca ²⁺ 7.6 mg/dL, haematocrit 25.5, Red blood cell smear morphology showed Howell–Jolly bodies, occasional schistocytes and burr cells, Pt 2: phosphate 7.5 mg/dL, LDH 603 to 2070 IU/L, S.Cr 4.8 mg/dL, haptoglobin <5mg/dL,

					reticulocyte 9.9%
Bucklin et al.(20)	Day 1: hypoxic, tachypnoeic, hypotensive, and oliguric, Day 2: worsening tachypnoea, increasing oxygen requirements, hypotension, increasing somnolence, Day 3: worsening hypotension, leucocytosis, and renal function from presumed septic shock	Day 1: 1st dose in the evening, moderate symptoms overnight, Day 2: 2nd dose, worsening of symptoms by evening	12.5 mg/dL, 19.3%, NR	Present, Haemolytic Anaemia	Hb 11.4 g/dL, WBC 49000/ μ L (89% lymphocytes), platelets 42000/ μ L, Na ⁺ 119 mmol/L, Cl ⁻ 78 mmol/L, anion gap 24, S.Cr 5.19 mg/dL, TB 0.8 mg/dL, Stool cultures: Clostridium difficile toxin. multiple endotracheal aspirate cultures that grew both Pseudomonas aeruginosa and Aspergillus fumigates
Cheah et al. (23)	hypoxic, tachypnoea, and progressive respiratory distress	12 hrs	NR, 6.8%, 88%	Present, oxidative haemolysis	Hb 10.9 g/dl, WBC 7.6×10^9 /l; lymphocytes 3.6, LDH 499 U/l , urate 0.4 mmol/l, Blood film demonstrating CLL and numerous blister cells
Sonbol et al. (16)	hypoxemia, arterial blood was brown in colour, tea-coloured urine	24 hrs	16.1, 12.9%, 75%	Rasburicase and/or methylene blue-induced haemolysis	Hb 7.1 g/dL, S.Cr 2.1 mg/dL, Phosphorus 6.2 mg/dL

				was suspected., developed progressive anaemia	
Ng et al.(19)	asymptomatic	2 hrs	11.1, 4.6%, peaked to 8% 6 h after the start of rasburicase Infusion, 87%	NR	WBC $7.59 \times 10^3/\text{mm}^3$, neutrophils 78%, lymphocytes 15%, eosinophils 6% , basophils 1%, Hb 11.8 g/dL, platelet $342 \times 10^3/\text{mm}^3$, CO_2 28 mEq/L, BUN 7 mg/dL
Bauters et al.(17)	cyanosis, symptoms of pancreatitis	Few hours after administration of the second dose	NR, 17.3%, NR	Present, Haemolytic anaemia	Nadir-haemoglobin 3.3 g/dL. TB 6.37 mg/dL, IB 5.54 mg/dL, LDH 9993 U/L, amylase 380 U/L and lipase 1024 U/L
Bhat et al. (12)	hypoxia	10 hrs	22.1 mg/dL, 7–10%, 70%	NR	WBC $533,900/\text{mm}^3$ (89% blasts), Hb 10.1 mg/dL, platelets $27,000/\text{mm}^3$, BUN 23 mg/dL, LDH 4,698 mg/dL
Borinstein et al.(18)	cyanotic, brownish discoloration of his urine	90 min after infusion	16.2 mg/dL, 9.5%, 80%	Present	The blood sample obtained shows chocolate brown colour, haematocrit

					39.8%, platelet count 32 K/mm ³ , WBC 10.3 K/mm ³ with 2% blasts, BUN 32 mg/dL, LDH 4805 IU/L, phosphorous 6.2 mg/dL, and Ca ²⁺ 16.7 mg/dL
Kizer et al. (29)	Pt 1: shortness of breath, Pt 2: short of breath	Pt 1: After starting Chemotherapy, Pt 2: Next day	Pt 1: 13.6 mg/dl (reference value 3.0 – 8.0 mg/dl), Pt 2: 14.0 mg/dl, Pt 1: 14.9%, Pt 2: 19.7%-21.5%, Pt 1: 80%, Pt 2: 50% venti-mask	Pt 1: NR, Pt 2: NR	Pt 1: increased serum levels of creatinine, potassium, and phosphorous, Pt 2: hypocalcaemia, mild hyperphosphatemia and elevated serum creatinine
Browning et al.(13)	Seizures and Infection	3 hrs	14.6 mg/dL, 9.8%, 92.3%	Present	Na ²⁺ 152 mEq/L, Cl- 91 mEq/L, total CO ² content 6.0 mEq/L, glucose 530 mg/dL, BUN 16 mg/dL, S.Cr 3.5 mg/dL, Ca ²⁺ 11.2 mg/dL, magnesium 4.1 mg/dL, phosphorus

					19.9 mg/dL, WBC $31.5 \times 10^3/\text{mm}^3$ (50% neutrophils, 34% lymphocytes, 6% monocytes, 4% bands, 3% myelocytes, 2% metamyelocytes, 1% progranulocytes), haematocrit 46.5%, and platelet count $581 \times 10^3/\text{mm}^3$
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NR: Not Reported; S.Cr: Serum Creatinine; Hb: Haemoglobin; WBC: White Blood Cells;
LDH: Lactate dehydrogenase; IB: Indirect Bilirubin; DB: Direct Bilirubin; TB: Total
Bilirubin; BUN: Blood Urea Nitrogen; K^+ : Potassium; Ca^{2+} : Calcium; Na^+ : Sodium; Cl^- :
Chloride; CO_2 : Carbon dioxide; hrs: hours;