

Note: This is Online Appendix 1 of Pare BC, Camara AM, Camara A, et al. Ebola outbreak in Guinea, 2021: Clinical care of patients with Ebola virus disease. S Afr J Infect Dis. 2023;38(1), a454. <https://doi.org/10.4102/sajid.v38i1.454>

Online Appendix 1

Table 1 A: Information on the 13 EVD-patients and one patient with Lassa virus disease (LVD).⁴³ Clinical presentation, organ function, treatment and clinical outcomes are documented. Rows of non-survivors are shaded grey. Patients were admitted between the onset of the Ebola outbreak mid-February and beginning of May 2021. List of abbreviations: see end of the table.

Nr	Gender/weight	Age	Outcome; DOA; LOS; days; hrs if <48h	DOSA	Viral load: CT value (GP/NP)	Vac: Y/N	REG-EB3 Y/N	SpO ₂ /RR on arrival	SpO ₂ < 94% after 24h	NIBP ; arrival (mmHg)	Fluid resuscitation in first 24 h; IV maintenance; enteral fluids	Hypotension after 24 h; SBP < 90 mmHg	Need for fluid resuscitation after 24h: Y/N†
EVD 1	F/weight unknown	70	Death; 39 h	D2	Not available (NA)	No	No	RR :26	Yes	80/60	4000ml IV replacement (RL)/24h; IV maintenance	Yes; lowest SBP: 60	Yes; blood-stained frequent stools;
EVD 2	F/70kg	54	Survival; D13	D4	(NA)	No	No	SpO ₂ : 98%-air; RR:20	No	90/60	4000ml IV replacement (RL)/24h; IV maintenance	No	No
EVD 3	F/45kg	55	Survival; D11	D12	GP:35; NP: 29	No	Yes, D6	Stable respiration	No; SpO ₂ : 97% in air, D3	SBP:100, D3	Stable circulation; enteral fluids tolerated	No	No
EVD 4	F/60kg	30	Survival; D12	D10	GP:30 NP: 26	No	Yes, D9	Stable respiration	No; SpO ₂ : 98% in air, D7	100/80	Stable circulation; enteral fluids tolerated	No	No
EVD 5	M/87kg	65	Survival; D32	D4	GP: 0 NP:34	No	Yes, D9	Stable respiration	No; SpO ₂ : 98% in air, D3	100/60, D3	Stable circulation; enteral fluids tolerated	Yes; lowest SBP: 80, D9	Fluid resuscitation on D9; Compensation of enteral losses; no vasopressors needed.†
EVD 6	M/62kg	22	Survival; D23	D13	NA	No	Yes, D7	SpO ₂ : 95%-air; RR:22	No	SBP: 110	IV maintenance & ORS/Plan A	No	Diarrhoea D3-5; losses compensated; no severe dehydration.
EVD 7	M/64kg	42	Survival; D18	D3	NA	No	Yes, D5	Stable respiration; RR:20	No; SPO ₂ : 98% in air, D3	110/70	IV maintenance & ORS/Plan A	No	Diarrhoea/vomiting D2; losses compensated; no severe dehydration.
EVD 8	M/69kg	32	Survival; D21	D2	GP:26; NP:21	No	Yes, D4	SpO ₂ :92% air; RR:22	No	110/70	IV maintenance & ORS/Plan A	No	No
EVD 9	M/?	45	Death; 13 h	D6	GP:26; NP:22	No	No	O ₂ administered	Death on D1	Signs of shock	4000 ml IV replacement (RL)/24h; IV maintenance	Signs of shock	

EVD 10	M/62kg	29	Survival ; D10	D5	GP:27; NP:23	No	Yes, D3	SpO ₂ : 98%- air; RR: 20	SpO ₂ : 93%, D3	100/60, D2	IV maintenance & ORS/Plan A	No	Diarrhoea D2/3, losses were compensated; no severe dehydration.
EVD 11	F/37kg	70	Death; 41 h	D9	NA	No	No	SpO ₂ : 86%- air;	SpO ₂ 83- 96% on 2-10 l O ₂ /min, D2	110/60	4000ml RL IV replacement/24h; IV maintenance	Signs of shock	
EVD 12	F; weight? 40 years; pregnancy 32- 34/40 gestation		Death; 6 h	D2	GP:24; NP: 22	D8‡	No	SpO ₂ 80% air; SpO ₂ :100% 10l O ₂ /min; RR: 32	Death on D1	140/80	D1 – hours after arrival: NIBP: 80/60; need for fluid resuscitation	Signs of shock	
EVD 13	F/45kg	40	Survival; D21	D7	GP: 28; NP: 23	No	Yes, D2	SpO ₂ : 95% in air; RR: 20	No	140/80	IV replacement 1000ml (RL)/24h; IV maintenance	No	Careful fluid management in view of enteral losses & AKI. No vasopressors needed.
LVD 1	M/68kg	25	Death; D6		Not applicable	No	NA	SpO ₂ : 97% in air; RR:26	D6: SpO ₂ un- measurable on 10 l O ₂ /min (D6)	170/100	No fluid resuscitation required in the first 24h.	Pre-terminal D6	Up to a pre-terminal state, no vasopressors required.
<i>On D2 the patient (LVD1) left the ECT against medical advice. Three days later he was re-admitted with signs of multi-organ dysfunction and died 24 hours later.</i>													

Table 1 B: Further information on the 13 EVD-patients and one patient with Lassa virus disease (LVD)⁴³ including: clinical presentation and organ function, clinical outcomes. Abbreviations: seen end of the table.

EVD Nr	Hb- arrival/ lowest HB during admission; need for RBC- transfusion	GCS & BS ; arrival	BS <70mg/dl after 24 h	Lowest GCS; Convulsions	Creatinine(mg/dl); UO during admission	MRDT	Antibiotics & anti-malarial drugs on arrival*	Summary: Organ-dysfunction on ETU-admissions; clinical progress†; continuity of care§
EVD 1	Not recorded; potential benefit from RBC-transfusion & FFP	GCS: 10/15; BS: 198 mg/dl	No	GCS: 4/15, D2; No convulsions	Creatinine not available (NA); no detailed UO-documentation	NEG	Ceftriaxone (Cef); Metronidazole (Metro)	MOF on arrival: Signs of respiratory distress, haemodynamic instability could not be corrected, deteriorating. No co-morbidities. Death at 39h.
EVD 2	12 g/dl (day 1)	GCS: 15/15; BS: 101 mg/dl	No	GCS: 15/15; No convulsions	Creatinine NA ; Good UO: no detailed documentation.	NEG	Cef; Metro	SOF on arrival: Haemodynamic instability could be corrected on D1&2 with IV fluid replacement; normal GCS. Co-morbidities: Potential Hepatitis B; Survival.
EVD 3	No clinical signs of anaemia	GCS: 15/15; BS not recorded	No	GCS: 15/15; No convulsions	Creatinine NA; Good UO; no detailed documentation	NEG	Cef	No severe organ-dysfunction. This patient remained stable and presented only non-severe symptoms. No co-morbidities. Survival.
EVD 4	No clinical signs of anaemia	AVPU=A; BS not recorded	No	GCS: 15/15; No convulsions	Creatinine NA; Good UO: no detailed documentation	NEG	Cef; Metro; Co-Artem	No severe organ-dysfunction. This patient remained stable and presented only non-severe symptoms. No co-morbidities. Survival.
EVD 5	No clinical signs of anaemia	GCS: 15/15; BS not recorded	BS: 67mg/dl, D9; BS was stabilised.	GCS: 15/15; No convulsions	Creatinine NA; Good UO: no detailed documentation	NEG	Cef; Co-Artem started prior to arrival	Stable condition on arrival. D9: haemodynamic instability associated with enteral fluid losses. Circulation stabilised with fluid resuscitation & compensation of further losses. Survival.
EVD 6	No clinical signs of anaemia	GCS: 15/15; BS not recorded	No	GCS: 15/15; No convulsions	Creatinine NA; Good UO: no detailed documentation	POS	Cef ; Metro; Artesunate	No severe organ-dysfunction. This patient remained stable and presented only non-severe symptoms. No co-morbidities. Survival.
EVD 7	No clinical signs of anaemia	GCS: 15/15; BS not recorded	BS: 60mg/dl, D5	GCS: 15/15; No convulsions	Creatinine NA; Good UO: no detailed documentation	POS	Cef; Artesunate	No severe organ-dysfunction. This patient remained stable and presented only non-severe symptoms. No co-morbidities. Survival.
EVD 8	No clinical signs of anaemia	GCS: 15/15; BS not recorded	No clinical signs	GCS: 15/15; No convulsions	Creatinine NA; Good UO: no detailed documentation	POS	Cef; Metro; Artesunate	No severe organ-dysfunction. This patient remained stable and presented only non-severe symptoms. No co-morbidities. Survival.
EVD 9	RBC- transfusion would have been needed. Potential benefit from FFP.	GCS: 13-12/15; LOC worsened rapidly		No convulsions	Creatinine NA	NEG	Cef; Artesunate could have been started¶	Critical condition & MOF on arrival. Arrival was at around 19:00, RBC-transfusions could not be organised at this time of the day. Co-morbidity: potential Hepatitis B. Death at 13 h.
EVD 10	No clinical signs of anaemia	GCS: 15/15; BS not recorded	No clinical signs	GCS: 15/15; No convulsions	Creatinine NA; Good UO: no detailed documentation	POS	Cef; Metro ; Artesunate	No severe organ-dysfunction. This patient remained stable and presented only non-severe symptoms. No co-morbidities. Survival
EVD 11	Haemodynamic instability & anaemia. RBC-transfusion	AVPU=A on arrival; BS: 52 mg/dl	BS : 23mg/dl, D2	GCS 3/15 (D3); No convulsions	Creatinine NA	NEG	Cef; Metro; Artesunate	Critical condition & MOF on arrival: Respiratory dysfunction. Haemodynamic instability not responsive to fluid resuscitation. The patient potentially would have

	requested, but not available in time. Potential benefit from FFP.						could have been started¶	benefited from NIV, a blood transfusion, FFP and vasopressors. Co-morbidity: Low body weight (37kg); Death at 41h.
EVD 12	14 g/dl, D1	GCS: 12/15 on arrival ; rapid deterioration to 3/15 5; BS: 90 mg/dl (arrival), control after 2-3 h: 193 mg/dl		GCS 3/15; No convulsions	Creatinine NA, UO < 0,5 ml/kg/hour for 4-6 hrs	NEG	Cef; Artesunate could have been started¶	Pregnant patient (32-34/40); Critical condition & MOF on arrival: respiratory function could initially be stabilised with supplemental O2; haemodynamic instability worsened rapidly; signs of bleeding (potential DIC); GCS deteriorated rapidly; AKI on arrival. Vital organ-functions could not be stabilised to administer REG-EB3. Death at 6h.
EVD 13	14.2 g/dl, D1; 9,3 g/dl, D19	GCS: 15/15; BS: 107 mg/dl	BS : 68mg/dl; D11	GCS: 15/15; No convulsions	Creatinine: 2,7 mg/dl, D3; Creatinine: 3,3 mg/dl, D6 (GFR-estimation: 14,3 ml/min); UO < 0,5 ml/kg/h > 6 h, D5; KDIGO: ⁴⁸ 1-2	NEG	Cef; Metro	Clinical progress: Replacement of enteral fluid losses; fluid management, no nephrotoxic drugs, adaptation of drug doses; ^{4,10} moderate electrolyte abnormalities (e.g., max. K+: 5,5 mmol/l, minimal Na+: 127 mmol/l) could be treated. Following ETC- discharge: Evaluation for TB (persisting cough & small pleural effusion); HT-treatment; Nutritional support.
<i>LVD I</i>	<i>16,3 g/dl; no need for RBC-transfusion. Most likely no benefit from FFP or platelet-transfusion</i>	<i>GCS :15/15 ; BS 196mg/dl</i>	<i>No</i>	<i>GCS D6 : 7/15; no convulsions</i>	<i>Creatinine: 2,1mg/dl, D1; GFR-estimation, D1: 52 ml/min;; Anuria on D5 & D6 (KDIGO⁴⁸:3)</i>	<i>NEG</i>	<i>Cef</i>	<i>The patient left ETC on D2 and was re-admitted on D5: Considerable biochemistry abnormalities already on D1; Pre-dominant organ-dysfunctions: AKI leading to further terminal MOF (associated rhabdomyolysis and elevated transaminases). Death on D6. Co-infection with SARS-CoV2; Ebola & Marburg-virus PCR: negative</i>

Abbreviations: DOA: date of admission; LOS: length of stay; D: day; h: hours; DOSA: delay from onset of symptoms to ETC admission in days; ARF: acute respiratory failure; SpO2: peripheral oxygen saturation; RR: respiratory rate (breaths/min); FIO₂: Fraction of inspired O₂; NIBP: non-invasive blood pressure; SBP: systolic BP; RL: Ringers Lactate; RL-Dex5%: pre-mixed Ringer Lactate- Dextrose 5%; NS- Normal-Saline; HB: haemoglobin; RBC- transfusion: red blood cell-transfusion; FFP: fresh frozen plasma; GCS: Glasgow Coma Score; AVPU: Alert; verbal response, reaction to pain; un-responsive; BS: blood sugar; UO: urine output; AKI: acute kidney injury; KDIGO:⁴⁸ Kidney Disease: Improving Global Outcomes ; MOF: multi-organ-failure; SOF: single organ failure; MRDT: Malaria rapid diagnostic test; Vac: vaccination; NA: not available; Cef: Ceftriaxone Metro: Metronidazole; HT: hypertension

Cockcroft formula³¹ was used to estimate glomerular filtration rate (normal 95-110ml/min).

†**Pragmatic training in critical care** started on 20.03.2021. Advanced elements of essential critical care were therefore introduced end of March. Equipment needed for basic non-invasive respiratory support arrived also at this stage.

‡**EVD 12: Ebola vaccination** D8 before onset of symptoms.

§**Continuity of care:** A follow-up program for Ebola-survivors was established following WHO recommendations.^{1,41}

¶In critically ill patients treated in malaria endemic regions, Artesunate should be started even if the first Malaria-test is negative (see WHO Malaria guidelines; 2021).³⁷