

Table 1. Detailed clinical characteristics of status epilepticus.

REFERENCE	No. OF CASES	GENDER	AGE	PREVIOUS CARDIOLOGIC HISTORY	CHARACTERISTICS OF SE				
					AETIOLOGY	TYPE	LOCALIZATION	TREATMENT	RESPONSE
Sakuragi <i>et al.</i> 2007	1	F	59	PM for sick sinus syndrome	Astrocytoma	NCSE	Left T	PHT, CBZ	RESP
Shimizu <i>et al.</i> 2008	1	F	75	NO	Grand Mal epilepsy	GCSE	Gen	DZP, PRO, PHT, VPA	RSE
Bosca <i>et al.</i> 2008	1	F	61	NO	TLS	CSE	NA	DZP, CBZ, LEV	RESP
Legriel <i>et al.</i> 2008	1 (2 episodes)	F	54	NO	Remote T-O Stroke	FCSE	T-O	CLN, LTG	RESP
						FCSE	T-O	PHT, LEV	RESP
Seow <i>et al.</i> 2008	1	M	62	NO	Encephalomalacia	NA	Right F	LZP, PRO	RSE
Lemke <i>et al.</i> 2008	2 (3 episodes)	F	63	NO	Hyponatremia	GCSE	Gen	PHT	RESP
			50	NA	Epilepsy since childhood	GCSE	N	LEV, CBZ	RESP
				Previous TTC		GCSE	NA	DZP	RESP
Fugate <i>et al.</i> 2009	1	F	82	NO	PRES	GCSE	NA	LZP, LEV	RESP
Wakabayashi <i>et al.</i> 2011	1	F	68	NA	NA	MSE	Right F	PHT, CBZ	RESP
Benyounes <i>et al.</i> 2011	1	F	79	NO	Leukoaraiosis	NCSE	Left F-T	CLB, LEV	RESP
Mrejen-Shakin <i>et al.</i> 2011	1	F	50	NA	NA	GCSE	NA	NA	NA
Rodriguez de Antonio <i>et al.</i> 2011	1	F	43	NA	Cryptogenic TLE	NA	NA	DZP, VPA, ZNS	RESP
Traullé <i>et al.</i> 2011	1	M	55	NA	TBI	NCSE	Left F	NA	NA
Finsterer <i>et al.</i> 2013	1	F	47	NO	Encephalomyopathy (suspected NMD)	GCSE - NCSE	Gen	LZP, LEV, VPA, MZM	RESP
Hocker <i>et al.</i> 2013	3	2F, 1M	18-47-25	NA	NA	NA	NA	PTB, ISF, MZM	RSE
Belcour <i>et al.</i> 2015	18	11 M; 7 F	58 +/-17	NA	NA	CSE	NA	CLN, PHT, MZM, THP	RSE
Koo <i>et al.</i> 2015	1	F	83	NO	Epilepsy symptomatic of previous stroke	GCSE	NA	LZP, PHT, VPA	RESP
Srivastava <i>et al.</i> 2016	1 (2 episodes)	M	14	NO	TLE	GCSE	NA	NA	RESP
Miller <i>et al.</i> 2017	1	F	49	Previous TTC	Epilepsy	GCSE	NA	NA	RSE
Uemura <i>et al.</i> 2016	1	F	61	NA	NA	NCSE	Left F-T	NA	NA
Personal cases 2018	3	F	74	NO	low grade glioma	GCSE-NCSE	Left F	DZP, PHT, VPA	RESP
		F	63	NO	Cryptogenic	GCSE-NCSE	Bi-Frontal	VPA	RESP
		F	65	Surgery for atrio-ventricular canal	Brain metastasis	GCSE	Right T	DZP	RESP

RESP: responsive; RSE: refractory status epilepticus; T: temporal; O: occipital; F: frontal; NCSE: non-convulsive status epilepticus; GCSE: generalized convulsive status epilepticus; MSE: myoclonic status epilepticus; FCSE: focal convulsive status epilepticus; CSE: convulsive status epilepticus; TBI: traumatic brain injury; TLE: temporal lobe epilepsy; PRES: posterior reversible encephalopathy; NMD: neuro-muscular disease; NA: Not available.

Table 2. Characteristics of cardiological findings.

REFERENCE	PRESENTING CARDIAC SYMPTOMS/SIGNS	ECG ALTERATIONS	ECHO-CARDIAL ALTERATIONS	TYPE OF TTC	CARDIAC ENZYMES	ACUTE CORONAROGRAPHY	ACUTE VENTRICULOGRAPHY
Sakuragi <i>et al.</i> 2007	rales and pulmonary congestion	diffuse ST elevation, prolonged QTc	severe hypokinesia of ant wall and apex	Classic	CK-MB 39 U/L CPK 224 U/L BNP 1202 pg/ml	normal	apical and antero-septal hypokinesia with hyperkinesia of basal segment
Shimizu <i>et al.</i> 2008	hypotension	diffuse ST elevation then T wave inversion	apical ballooning and basal hyperkinesia	Classic	CK-MB 95 U/L CPK 2871 U/L	normal left CA and hypoplastic right CA	apical ballooning
Bosca <i>et al.</i> 2008	chest pain, asthenia, dyspnoea at rest, pallor and basal crepitant rales	Sub-epicardic alteration in v3, inverted T waves V4-V6	lateral-apical dyskinesia	Classic	Troponin: mild increase	NA	NA
Legriel <i>et al.</i> 2008	hypotension, dyspnoea at rest, bi-basal crepitant rales, X-Ray chest: bilateral pulmonary oedema	sinus tachycardia and T-wave inversion	latero-septo-apical hypokinesia, apical ballooning, EF 40%	Classic	Troponin: 0.88 ng/ml	normal	NA
	respiratory distress and cardiogenic shock + pulmonary oedema	T-wave inversion in the anterior leads	latero-septo-apical akinesia, apical ballooning, EF 25%	Classic	Troponin: 10.5 ng/ml	normal	NA
Seow <i>et al.</i> 2008	hypotension	anterior ST elevation	EF 40%; mid- V ballooning sparing the apex	Mid-ventricular	elevated (not specified)	Non-significant stenosis	NA
Lemke <i>et al.</i> 2008	hypotension	sinus tachycardia and ST elevation in V2-V3	apical WMA and EF 35-40%	Classic	Troponin: 2.152 ng/ml	normal	LV anterior septal hypokinesia
	hypotension	sinus tachycardia, left bundle branch and ST depression in V1-3	septal and anterior wall hypokinesia, EF 50%	Mid-ventricular	Troponin: 10.96 ng/ml	normal	LV anterior septal hypokinesia
	hypotension	sinus tachycardia and ST depression, pre-atrial contraction, left axis deviation, left bundle branch, QT prolongation	global hypokinesia, EF 25-30%, mild RV systolic dysfunction	Global	Troponin: 9.297 ng/ml	normal	Severe LV hypokinesia
Fugate <i>et al.</i> 2009	hypotension	ST elevation	apical akinesia, EF 30%	Classic	Troponin: 0.1 ng/ml	normal	NA
Wakabayashi <i>et al.</i> 2011	none	diffuse inverted T waves, QTc prolongation	akinesia of the mid and distal segment of LV and hyperkinesia of basal segments	Classic	CPK: 338 U/L BNP: 758 pg/dl	NA	NA
Benyounes <i>et al.</i> 2011	none	inverted T waves in ant-lat leads	dyskinesia of apex, slight mid-V WMA, preserved systolic function	Classic	Troponin: 5 ug/l BNP: 1000 pg/ml	normal	NA

Mrejen-Shakin <i>et al.</i> 2011	VF and cardiogenic shock	NA	hypokinetic apical ballooning of LV	Classic	NA	NA	NA
Rodríguez de Antonio <i>et al.</i> 2011	NA	NA	NA	Classic	NA	NA	NA
Traullé <i>et al.</i> 2011	hypotension	lateral ST elevation	EF 35%; apical ballooning; hypercontractility of basal portions	Classic	Troponin: 25 ug/l CPK: 1269 UI/L	normal	LV apical ballooning
Finsterer <i>et al.</i> 2013	ventricular fibrillation	ST elevation	NA	NA	CPK 919 U/L	normal	apical and mid-ventricular akinesia
Hocker <i>et al.</i> 2013	NA	prolonged QTc (one patient with inferior T wave inversion)	EF 40% global hypokinesia; EF 48% generalized LV dysfunction; EF 49% mild gen hypokinesia	Global	Troponin: 0.03 ng/ml (2 NA)	NA	NA
Belcour <i>et al.</i> 2015	hypotension	ST elevation (4 pt), repolarization abnormalities (7 pt) inverted T waves (4 pt)	decreased EF (EF 45+/- 14%), 3 patient with WMA	NA	CK-MB: > 1.5 ng/ml (4 pt)	Normal (3 pt), other NA	NA
Koo <i>et al.</i> 2015	hypotension, loss of consciousness	ST elevation	apical ballooning of LV, EF 23%, focal hypokinesia of right apex with decrease RV systolic function	Global	Troponin: 4.87 ug/L	focal stenosis in ramus intermedius artery (hypokinesia discordant with coronary artery lesion)	NA
Srivastava <i>et al.</i> 2016	hypotension	T wave inversion in infero-lateral leads	decreased systolic function, hypokinesia and dilatation of apex	Classic	Troponin: 3.37 ng/ml (1 episode); 5.76 ng/ml (2 episode) BNP 1173 pg/ml (1 episode)	Normal	NA
Miller <i>et al.</i> 2017	none	sinus tachycardia	posterior wall akinesia and septal wall dyskinesia, EF 15-20%	Global	Troponin: 0.762	NA	NA
Uemura <i>et al.</i> 2016	none	diffuse inverted T waves	LV apical akinesia	Classic	NA	Normal	apex akinesia
Personal cases. 2018	chest pain, dyspnoea	diffuse T waves inversion and prolonged QTc	diffused akinesia and decreased ejection fraction (EF 38%)	Global	CK-MB: 6.5 ng/ml Myoglobin: 334 ng/ml Troponin: 0.89 ng/ml	Normal	mild LV dilatation, akinesia of medio-distal segments of anterior and inferior wall, apex hypokinesia, EF 40%
	none	anterior T-wave inversion	akinesia of medial and apical segments, hyperkinesia of basal segments, EF 30%	Mid-ventricular	Troponin: 1200 ng/ml	Normal	akinesia of medial segments EF 30%
	none	lateral T-wave inversion	Akinesia of septum, inferior and posterior wall, EF 38%	Global	Troponin: 1.86 ng/ml	NA	NA

EF: ejection Fraction; WMA: wall motion abnormality; CA: coronary artery; LV: left ventricle; RV: right ventricle; NA: not available.

Table 3. Therapy and outcome.

REFERENCE	THERAPY	OUTCOME								
		ECG		ECHO-CARDIO		CARDIAC ENZYMES		OTHER INVESTIGATIONS	OUTCOME	COMPLICATIONS
		TIMING	FINDINGS	TIMING	FINDINGS	TIMING	FINDINGS			
Sakuragi <i>et al.</i> 2007	Diuretics	28 days	improved ST elevation, QT prolongation and R progression, persisting inverted T waves	NA	NA	NA	NA	30 days left ventriculography: slight hypokinesia of the anterior wall	Improvement	No
Shimizu <i>et al.</i> 2008	nitroglycerin	NA	NA	4 weeks	Normal	NA	NA	No	Complete recovery	No
Bosca <i>et al.</i> 2008	heparin, β -blockers, nitrates, diuretics	2 days and 3 months	2 days: subacute anteroseptal necrosis, sub-epicardic ischemia from V3-V6, aVL; 3 months: normal	12 days	Normal	NA	NA	Coronarography (1 month): normal	Complete recovery	No
Legriel <i>et al.</i> 2008	Diuretics, ACE-Inhibitors	7 days	normal	7 days	Normal, EF 60%	NA	Normal Troponin	No	Complete recovery	cardiogenic shock, pulmonary oedema
	Diuretics, amine	NA	NA	NA	Normal	NA	NA	No	Complete recovery	cardiogenic shock, pulmonary oedema
Seow <i>et al.</i> 2008	NA	NA	NA	6 weeks	Normal	NA	NA	No	Complete recovery	No
Lemke <i>et al.</i> 2008	β -blockers, amine	NA	NA	9 days	improvement, EF 50-55%	NA	NA	No	Improvement	pulmonary oedema
	β -blockers, ACE-Inhibitors	NA	NA	9 days and 2 months	improvement, EF 50-55% (9 days); absence of WMA, EF 60-65% (2 months)	17 hours	6.78	No	Complete recovery	pulmonary oedema
	Amine, Swan-Ganz catheter placement	NA	NA	2 days	improvement, EF 50-55%	4 days	0.168	No	Improvement	pulmonary oedema
Fugate <i>et al.</i> 2009	NA	NA	NA	2 weeks	improvement, EF 67%	NA	NA	No	Complete recovery	No

Wakabayashi <i>et al.</i> 2011	warfarin/heparin	NA	NA	40 days	Normal	NA	NA	No	Complete recovery	giant apical thrombus
Benyounes <i>et al.</i> 2011	NA	NA	NA	10 days	Normal	NA	NA	No	Complete recovery	No
Mrejen-Shakin <i>et al.</i> 2011	amine	NA	NA	3 months	Normal	NA	NA	No	Complete recovery	VF and cardiogenic shock
Rodriguez de Antonio <i>et al.</i> 2011	NA	NA	NA	NA	NA	NA	NA	NA	Complete recovery	No
Traullé <i>et al.</i> 2011	Diuretics, amine	NA	NA	recovery within few days		recovery within few days		No	Recovery	No
Finsterer <i>et al.</i> 2013	amine	NA	NA	NA	NA	NA	NA	No	Complete recovery (3 weeks)	VF
Hocker <i>et al.</i> 2013	NA	NA	NA	Available for 3 patients: 55-37-22 days	Normal	NA	NA	No	Complete recovery	No
Belcour <i>et al.</i> 2015	Amine (11)	NA	NA	1 day	EF 61 +/-8% (normal 15 pt)	recovery of CK-MB		No	Complete recovery	No
Koo <i>et al.</i> 2015	β -blockers, ace-inhibitors, 3-hydroxy-3methylglutaryl-coA enzyme inhibitor, amine, diuretics, antiplatelet	NA	NA	< 10 days	improvement	NA	NA	No	Recovery	No
Srivastava <i>et al.</i> 2016	Amine, ACE inhibitors	NA	NA	NA	Normal	NA	NA	No	Complete recovery	No
Miller <i>et al.</i> 2017	NA	NA	NA	4 days	Normal, EF 60%	NA	NA	NA	Complete recovery	No
Uemura <i>et al.</i> 2016	NA	74 days	Normal	74 days	Improvement of wall motion	NA	NA	NA	Improvement	NA
Personal cases. 2018	Antiplatelet, β -blockers	2 months	Normal	8 days	Normal, EF 50%	15 days	Recovery	No	Complete recovery	No
	Antiplatelet, β -blockers, diuretics	19 days	Normal	NA	NA	19 days	Recovery	No	Complete recovery	No
	Antiplatelet, diuretics	8 days	Normal	8 days	Normal	1 day	Recovery	No	Complete recovery	No

EF: ejection fraction; WMA: wall motion abnormalities; NA: not available.