

Short-term Adverse-effects of Electroconvulsive therapy (SAVE) Checklist

The following checklist has been devised for a comprehensive assessment of short-term adverse effects of modified ECT in a clinical setting for use by mental health professionals or a physician. It is imperative that clinicians assess if the patients have the below-mentioned adverse effects at baseline. Non-medical mental health professionals are encouraged to seek assistance from clinicians or nurses if they encounter challenges in conducting assessments beyond their expertise.

Individuals receiving ECT would be assessed twice after the respective ECT session-

1. Immediate period of assessment: Initially at the beginning of the session till the immediate recovery from the treatment procedure

2. Delayed period of assessment: After shifting the patient to the ward and within 48 hours of the treatment procedure

Name:

Age:

Gender:

UHID:

Diagnosis:

Assessed by:

Adverse Effects	Definition	Procedure	ECT Number			
A. Immediate Assessment for Adverse Effects						
1. Cardiovascular System						
a. Significant Tachycardia	Heart rate >120 bpm during points of observation.	Measured by the examiner at specified intervals: 1. Baseline measurement 2. Before administration of ECT 3. Immediately after the cessation of seizures 4. Before shifting the patient to the ward side 5. Immediately after the patient has been shifted to the ward BP would be measured using a digital cuff in the supine position.				
b. Significant Bradycardia	Heart rate <60 bpm during points of observation.					
c. Significant Hypertension	Systolic blood pressure (SBP) >20% from baseline or absolute value >140 mm Hg during the points of observation.					
d. Significant Hypotension	SBP <20% from baseline or absolute value of <80 mm Hg during the points of observation.					
e. Significant Desaturation	Oxygen Saturation (SPO2) reading <90% during the points of observation.					
f. Asystole	Cessation of electrical and mechanical activity of the heart for >5 seconds, seen as a flat line on the ECG monitor.	Measured by the examiner using an ECG device during the ECT procedure and the immediate recovery period.				
g. Arrhythmia	Any abnormal rhythm seen on the ECG during the period of observation after the cessation of seizures.					
2. Gastrointestinal System						
a. Oral Injuries	Any breach in the mucosa of the oral cavity not present previously and thought to be a direct resultant of the treatment procedure.	Observation by the examiner after the cessation of seizure.				
b. Loosening/Breaking of Teeth	Loose/broken teeth, not present previously and thought to be a direct result of the treatment procedure.					
3. Respiratory System						

a. Prolonged Apnoea	Apnoea persisting longer than the duration of action expected for a particular muscle relaxant after administration of the required dose. E.g., 5 minutes for succinylcholine and 40 minutes for atracurium.	Observation by the examiner after the induction of anaesthesia.				
b. Suspected Aspiration	Inhalation of Oro-pharyngeal or gastric contents into the larynx and the respiratory tract characterised by significant cough & progressive dyspnoea or desaturation (SPO2 <90%) or wheeze and crackles on clinical examination.	Observation by the examiner during the immediate recovery period.				
4. Central Nervous System						
a. Delirium	Disturbances in attention, cognition or perception associated with disorientation clinically characterised by restlessness, irrelevant speech, agitation, and easy distractibility. Hypoactive delirium can present as withdrawn behaviour, motor retardation and apathy.	Observation by the examiner during the immediate recovery period.				
b. Prolonged Time for Orientation	Disorientation persisting for more than 30 minutes after the cessation of seizures.	Examiner to inquire about the patient's name, age, orientation to place, day of the week and current year/season. The type of questions selected would be based on the patient's ability to answer at baseline. Questions to be asked before shifting the patient from the ECT suite.				
c. Prolonged Seizure	Seizures (EEG/ motor) lasting for more than 120 seconds without any intervention.	Observation by the examiner during the ECT procedure (Intervention to abort seizure to be attempted only after 120 seconds after onset).				
5. Musculoskeletal System						
a. Fall	Sudden, involuntary, and unintentional body position change, to the ground or on a lower plane not present previously and thought to be a direct result of the treatment procedure.	Observation by the examiner during the immediate recovery period.				
b. Suspected Fracture/ Dislocation	Suspected break in the continuity or displacement of the bone characterised by pain, tenderness, swelling or loss of motion at the suspected area and thought to be a direct result of the treatment procedure.	Observation by the examiner during the immediate recovery period.				
c. Prolonged Gait Abnormality	Gait abnormality persisting for more than 30 minutes after the cessation of seizures.	Observation by the examiner during the immediate recovery period by asking the patient to walk in tandem.				

d. Prolonged Stance Abnormality	Stance abnormality persisting for more than 30 minutes after the cessation of seizures.	Observation by the examiner during the immediate recovery period by asking the patient to stand by keeping his feet together while keeping his eyes open.				
6. Genitourinary System						
a. Enuresis	Loss of bladder control after the administration of charge.	Observation by the examiner during the immediate recovery period.				
b. Encopresis	Loss of bowel control after the administration of charge.	Observation by the examiner during the immediate recovery period.				
7. Other Adverse Effects						
a. Fever	Elevated body temperature >100° F measured in the armpit using a clinical thermometer when clinically indicated.	Measured as being present or absent. Measurement made by the examiner during the immediate recovery period.				
b. Delayed Onset Seizure	Seizure occurring later than 15 seconds of charge administration when the patient is still under the influence of anaesthesia.	Observation by the examiner during the ECT procedure.				
c. Tardive Seizures	Tardive seizure - spontaneous seizures occurring after the ECT procedure during the recovery period.	Observation by the examiner during the immediate recovery period.				
B. Delayed Assessment for Adverse Effects						
1. Gastrointestinal System						
a. Oral Injuries	Any breach in the mucosa of the oral cavity not present previously and thought to be a direct resultant of the treatment procedure.	Observation by the examiner after the cessation of seizure.				
b. Loosening/ Breaking of Teeth	Loose/broken teeth, not present previously and thought to be a direct result of the treatment procedure.					
c. Vomiting	Expulsion of gastric content via oral route, not present previously, thought to be directly associated to the treatment procedure.	Enquired by the examiner during the delayed recovery period.				
d. Nausea	Uneasy sensation of impending vomiting, not present previously, thought to be directly associated to the treatment procedure.	Enquired by the examiner during the delayed recovery period.				
2. Musculoskeletal System						
a. Fall	Sudden, involuntary, and unintentional body position change, to the ground or on a lower plane, not present previously and thought due to be a direct resultant of the treatment procedure.	Enquired by the examiner during the delayed recovery period.				
b. Myalgia	Soreness of the muscles, not present previously and thought due to being a direct result of the treatment procedure.	Enquired by the examiner during the delayed recovery period.				

c. Headache	Pain in the head, not present previously and thought due to being a direct result of the treatment procedure.	Enquired by the examiner during the delayed recovery period.				
d. Temporomandibular Pain	Pain in the temporomandibular region, not present previously and thought due to be a direct resultant of the treatment procedure.	Enquired by the examiner during the delayed recovery period.				
3. Central Nervous System						
a. Awareness Under Anaesthesia	Modification of Michigan Awareness Classification: (Grade of Awareness) Class 0- No Awareness Class 1- Paralysis (Feelings of one not able to move, speak or breathe) Designator D- distress included for patient report of fear, anxiety, suffocation, sense of doom, impending death etc.	Enquired by the examiner using an <u>open-ended</u> question asking what events do they remember of the particular day's ECT procedure.				
b. Sedation	Drowsiness or excessive sleep after acute recovery from ECT, not present previously and thought due to being a direct result of the treatment procedure.	Enquired by the examiner during the delayed recovery period.				
c. Delirium	Disturbances in attention, orientation, cognition or perception associated with either excessive motor activity or motor retardation (hyper or hypoactive states).	Enquired by the examiner during the delayed recovery period.				
d. Subjective Cognitive Impairment	Cognitive impairment as subjectively reported by the patient.	Enquired by the examiner as being present or absent.				
4. Other Rare Adverse Effects						
a. Fever	Elevated body temperature >100° F measured in the armpit using a clinical thermometer <u>when</u> clinically indicated.	Measured as being present or absent. Temperature will subsequently be measured if the patient reports the presence of fever.				
b. Phlebitis	Inflammation of the vein used for cannulation, not present previously and thought to be a direct resultant of the treatment procedure.	Observed by the examiner during the delayed recovery period.				
c. Todd Phenomenon	Observation of transient neurological deficits like aphasia, hemiparesis, and visual loss after ECT.	Enquired by the examiner during the delayed recovery period.				
d. Tardive Seizures	Spontaneous seizures occurring during the post-ECT recovery period.	Enquired by the examiner during the delayed recovery period.				
Other adverse effects:	Any other adverse effect thought to be related to ECT.					
Remarks (Remarks for treatment measures employed for the particular side effects)						