ELECTROCONVULSIVE THERAPY

I. Definitions

Convulsive therapy, elctroconvulsive therapy, subconvulsive therapy, monitored therapy, multiple-monitored therapy, insulin coma therapy, leucotomy.

II. Historical Background

Neurosyphilis, fever therapy, Wagner Jauregg; Meduna, antagonism of schizophrenia and epilepsy; Sakel, insulin coma; Cerlette, Bini, electroconvulsive therapy; curare, succinylcholine; oxygenation; barbiturate anesthesia. Legislative interdiction; APA Task Force response; Royal College of Psychiatrists response.

III. Indications

A. Depressive disorders: Diagnostic criteria; significance of vegetative symptoms, suicide, inanition. Age criteria.

B. Schizophrenia, schizoaffective disorders, catatonia.

C. Mania.

D. Special indications; parkinsonism, pregnancy.

IV. Risks

Fracture, cognitive change, panic and delirium, death. Prolonged effects; evidence from neuropsychology, EEG, Neuropathology, relapse rates, CT scans.

V. Procedures

A. Pre-treatment assessments (Medical examination, laboratory tests, spine x-ray, EEG).

B. Treatment Modes: anesthesia (Barbiturate, succinylcholine, atropine); unilateral and bilateral electrode placement; AC and brief pulse stimuli; seizure duration monitoring (b.p. cuff; heart rate; EEG).

C. Criteria for outcome: Hamilton depression scale scores; DST and TSH response to TRH; cognitive tests; EEG criteria.

VI. Drug and ECT interactions

A. Concurrent use of TCA, antipsychotic drugs, anxiolytics, lithium.

B. Sequential (maintenance) use of TCA, antipsychotic drugs, anxiolytics, lithium.

VII. Aftercare and Relapse

Incidence of relapse (by diagnosis, age); prevention by maintenance drug therapy; maintenance ECT.

VIII. Consent

Use of ECT is voluntary, involuntary patients; consent from relatives and significant others; use of ECT in minors; information recommended for 'informed' consent; patterns of usage.

IX. Mode of Action

History of theories; neurohumoral theory; neuroendocrine view; calcium metabolsim; blood-brain barrier permeability; neuroendocrine neurohumoral predictors.