Overview of Electroconvulsive Therapy (ECT) for the General Practitioner
Why Does a GP Need to Know about ECT?

• May well see a patient who might benefit

• Advise patient seeking your trusted opinion

• Provision of ongoing care
Don’t Be Afraid
Summary

- Modern Psychiatric Intervention
- Controversial
- Evidence for Efficacy is Clear
- Specific Indications
- Unknown Mechanism of Action
- Safe Procedure
Summary

- Memory Disturbance is Major Adverse Effect
- Informed Consent
- Specialist Psychiatric Procedure
- Hospitalisation
- Can be used as Maintenance Therapy
- Day Procedure
Modern Psychiatric Intervention

- ECT awareness is prerequisite of medical student training
- Not a required skill of RANZCP Fellows
- Must complete accredited ECT Training Program
- Must maintain accreditation
Controversial

- Epitomises controversy in psychiatry
- Seen to be barbaric
- “Shock”
- History
Evidence for ECT

- ECT Highly Effective for Major Depression
- Remission rates between 50-90%
- Superior in efficacy to medication
Indications for ECT

- Major Depressive Disorder
- Melancholic Features
- Psychotic Features
Indications for ECT

- Bipolar Depression
- Post-Partum (Depression, Psychosis)
Indications for ECT

- Bipolar Mania
- Schizophrenia
- Schizoaffective Disorder
- Catatonia
- Others (NMS, Parkinson’s, OCD, screaming)
Mechanism of Action is the same as for General Anaesthesia
We Don’t Know
General Anaesthesia

- Analgesia
- Amnesia
- Unresponsiveness/Immobility
ECT

- Antidepressant
- Amnesia (more extensive)
- Transient Remission
Anticonvulsant

• History of ECT

• Anticonvulsants in Psychiatry

• Enhanced GABA transmission
Monoamine Transmitters

- Dopamine and Serotonin
- Desensitising presynaptic adrenergic autoreceptors
Central Neuropeptides

- Corticotrophin Releasing Factor (CRF)
- Somatostatin (STS)
- Neuropeptide Y
- Brain Derived Neurotrophic Factor (BDNF)
Neuroendocrine Hypothesis

- Diabetes/Insulin Model
- Insufficiency of Hypothalamic Mood-Maintaining Peptide
- Repeated seizures enhances its production and release
Cerebral Inhibition

- Reduced Prefrontal cerebral blood flow post-ECT
- Decrease Serotonin Receptor Binding on PET
Safe Procedure

- Mortality of 2:100,000 treatments
- 1.6 deaths per 10,000 patients for typical course of 8 treatments
ECT is a low-risk procedure, even in the older cardiac patient....... To put the mortal risk with ECT in proper perspective, it is only necessary to note that ECT is about 10 times safer than childbirth, that approximately 6 times as many deaths annually in the U.S. are caused by lightning as by ECT, that two complications of psychotropic drug therapy in younger women (fatal myocardial infarction and fatal subarachnoid hemorrhage) virtually never occur with ECT, and that the death rate reported for ECT is an order of magnitude smaller than the spontaneous death rate in the general population. (Abrams 1997)
Memory Disturbance

- Immediate Disorientation
- Clear patchy short term retrograde and anterograde amnesia
- Several Cognitive Domains improve beyond baseline levels
Autobiographical Memory

- Major Concern for people
- Evidence is difficult to obtain and sparse
- Little evidence to suggest significant impairments
- Clinical practice suggests otherwise
- Informed Consent
Measures to Reduce Memory Disturbance

- Electrode Placement Bilateral (BT, BF) versus Right Unilateral
- Pulse Width (Brief versus Ultrabrief)
- Dose
- Frequency of Treatment
- Medications
- Quality of ECT
- Quality of ECT Service
Informed Consent

- Rigorous level of Information Provision
- Withdraw consent at any stage
- Involuntary patients and Mental Health Tribunal
Specialist Psychiatric Procedure

- Strict and highly governed credentialing
- Specialised Psychiatrists/Anaesthetists/Nurses
- Comprise a Specific ECT Service
- Weekly Clinical Review Processes and Procedures
- Audit
Hospitalisation and Day Procedure

- All patients initially hospitalised
- Private versus Public
- Day Procedure for Maintenance common
Maintenance

- Relapse rate high
- Require standard maintenance antidepressant management
- ECT +/- Medications can be used
- ECT up to six weeks apart
Patient Resources

- Wikipedia
- TED Talks (Dr Sherwin Nuland)
- Insight
How would you feel if a loved one was getting ECT? @JenBrockie insightsbs
Thank-you