



**Australian Government**  
**Civil Aviation Safety Authority**

# **Aeromedical decision making (ADM) in Transient Global Amnesia**

## **Disposition aeromédicalé en cas d'amnesie globale transitoire**



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# Diagnostic Criteria for TGA



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- Presence of anterograde amnesia that is witnessed
- No clouding of consciousness or loss of personal identity
- Cognitive impairment limited to amnesia
- No focal neurological or epileptic signs
- No recent history of head trauma or seizures
- Resolution of symptoms within 24hrs
- Mild vegetative symptoms (headache, nausea, dizziness) may be present during the acute phase



# Epidemiology of TGA



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**Clinical  
Condition**

- Incidence 3-8 per 100,000 per year
- 75% attacks occur in 50-70yo
- Annual recurrence 6-10%
- Precipitating events described in 50-80%:
  - Sudden immersion hot or cold water
  - Physical exertion, sexual activity
  - Emotional or psychological stress
  - Pain
  - Medical procedures



# Differential Diagnoses



## Clinical Condition

- Ischaemia in the posterior cerebral circulation
- Intoxication, adverse drug side-effects
- Complex focal seizures, transient epileptic amnesia, post-ictal conditions
- Psychogenic fugue, dissociative disorders
- Post-traumatic amnesia
- Hypoglycaemia



# Management



- Document history, signs and symptoms
- Witness accounts
- EEG
- MRI 24-72hrs after onset



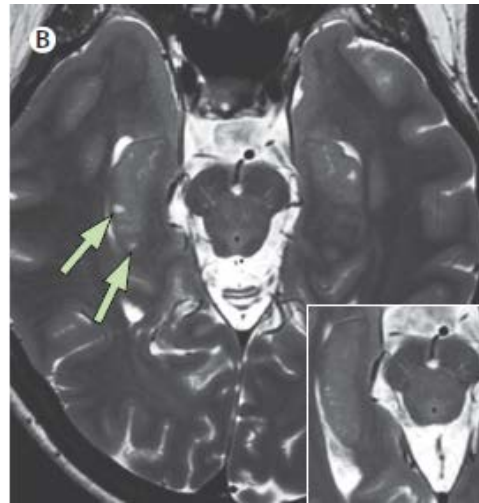
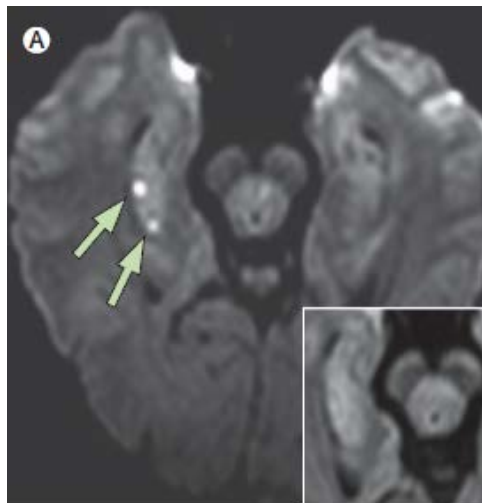
# Prognosis



- 7% are diagnosed with epilepsy (Transient Epileptic Amnesia) within 12M of diagnosis
- 6.2% recurrence in 12M
- Annual recurrence rate 2.8% mean F/U 5yrs



# MRI Images





# Aeromedical Issues



- Meets clinical case criteria
- Recurrence rate
- Diagnosis of a serious condition in the future
- Worst case scenario of in-flight incident





# Risk Mitigation



- Institution of safety nets
  - a monitoring period
  - “as or with co-pilot” restriction to allow for differential diagnoses



# Case Presentation

- 61yo Angel Flight Pilot
- Confused after a morning walk
- Wife concerned he was having a CVA
- Hospital work up – clear CT, normal EEG
- Episode lasted several hours



# Flow chart for ADM in TGA

Neurologist report with diagnosis of TGA



REFUSE - all  
Classes 12/12

### Diagnosis of Exclusion

- \* Severe anterograde amnesia 4-6 hours
- \* Absence of dyspraxia or dysphasia
  - \* Witnessed event in its entirety
- \* No significant neurobiological features
  - \* Normal Imaging
- \* Full resolution within 24 hours
- \* No history of epilepsy or head injury



No recurrence + TGA  
confirmed



Class 1&3 MC/Prox  
Restriction  
Class 2 WSP  
+ Annual Progress report



No recurrence for 5  
years



Permanent Class 1&3  
MC/Prox Restriction  
Unrestricted Class 2 WSP



# Conclusion

- TGA is uncommon in clinical practice
- The aeromedical issues involved are recurrence rate and diagnosis of another safety relevant neurological condition
- The ADM process remains the same regardless of the clinical scenario



# References

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