

An Inconvenient Forgetfulness

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Background

- Automated donor apheresis carries the risk of adverse donor events (ADE)
- Plateletpheresis donor experienced amnesia post donation
- Attempted to determine-reports of association memory loss and plateletpheresis donation

Methods

Case History

- 75 year-old male repeat plateletpheresis donor successfully completed his donation
- Discharged from blood center to home
- A part-time resident of Florida- he was a long-time platelet donor

Case History

- Day of donation
 - Wife contacted blood center stating donor was *“lightheaded and dizzy and just wants to lay down”*
“almost passed out on the way home”
 - On call nursing staff advised to drink two large glasses of decaffeinated beverage and not move unassisted until symptoms resolved
 - Calls to donor the next day were not returned

Case History

- One day post donation- wife found car damaged in garage
- Police confirmed accident with truck
- Donor had no memory of event

Case History

- No injuries sustained by either party
- Evaluated by personal physician for loss-of-consciousness

Differential Diagnosis

- Lacunar syndromes
- Migraine variants
- Posterior cerebral artery stroke
- Syncope and related paroxysmal spells
- Temporal lobe epilepsy
- Transient global amnesia
- Basilar artery thrombosis
- Cardioembolic stroke
- Complex partial seizures
- Frontal lobe epilepsy

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Case History

- Diagnosis
 - Transient global amnesia (TGA)
- Donor outcome
 - Very low diastolic BP - primary physician believed donation caused it to drop further
 - The donor was having difficulty keeping his systolic BP within normal limits (too high) and diastolic BP up to normal limits (too low)
 - Physician did not want him to donate further

Results

- Pathophysiology- Uncertain
 - PET scans, MRI, single photon emission computed tomography (SPECT) and MR spectroscopy
 - Various memory regions of the brain are affected
 - Mediobasal temporal region, parahippocampus, hippocampus
 - Variety of causes and precipitating mechanisms

Clinical Presentation

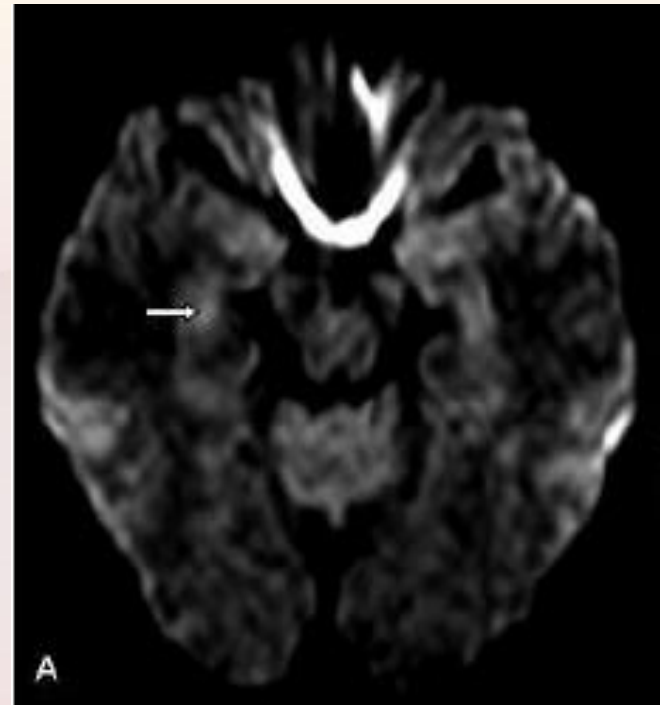
- Paroxysmal, transient loss of memory function
- Immediate recall is preserved as is remote memory
- Striking loss of memory for recent events
- Symptoms typically last less than 24 hours
- As it resolves patient may retain loss of memory of events during the attack

Treatment

- Supportive and reassurance
- At least one follow-up visit with neurologist

Results

- Relationship to Blood Donation/Infusion
 - No reference to direct relationship of whole blood or automated collection related to TGA
- TGA associated with infusion of DMSO-cryopreserved autologous PBSCs
 - Case report
 - Myeloablative chemotherapy – relapsing Hodgkin's lymphoma



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TGA -DMSO Infusion

- DMSO
 - Acute vasospasm in swine
- Anxiety
 - Hyperventilation may have resulted in respiratory alkalosis
 - Induced cerebral vasoconstriction with secondary ischemia in memory relevant structures
- Authors recommended adequate DMSO depletion

Conclusions

- Donor case TGA was most likely coincidental
- Reminder that serious ADEs both related and coincidental to the donation process can occur post donation

Conclusions

- Blood center staff
 - Ensure donors receive and understand educational post donation materials prior to discharge
- Donors who experience ADEs
 - Access to trained nursing staff or ADE counselors at all times
 - Ensures prompt medical care – minimizing injury to donor and others

Thank you