



Delirium After Cardiac Arrest – Can We Do Better?

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CASE PRESENTATION

Background

- Delirium is a common mental state for which there are myriad of known predisposing factors, such as advanced age, surgery, and acute myocardial infarction (MI) (1).
- In patients 60 years of age or older undergoing cardiac surgery, the incidence of post-operative delirium has been estimated to be as high as 55% (2,3).
- Post-operative delirium is associated with significant emotional distress, financial cost, morbidity and mortality (1,2,3).
- Despite the prevalence and serious implications of post-operative delirium, no targeted treatment exists; rather, the standard of care emphasizes prevention through early mobilization, pain management, re-orientation and preservation of baseline sleep-wake cycle (3).

Patient History

- 71-year-old male with past medical history notable for coronary artery disease with previous MI s/p percutaneous coronary intervention x4, paroxysmal atrial fibrillation on anticoagulation, poorly controlled type 2 diabetes and active tobacco use who presented to a local ED with complaints of sudden onset of severe chest pain.
- At the local ED, ECG was notable for inferior STEMI. He was loaded with aspirin, clopidogrel, started on a heparin infusion and promptly transferred by air to the Mayo Clinic for cardiac catheterization. En route, there was a brief loss of consciousness associated with ventricular tachycardia (VT) for which one shock was given with restoration of both mental status and normal sinus rhythm.

Intra-Operative Course

- Arrived at the Mayo ED and subsequently experienced cardiac arrest due to VT for which he received one shock, 100mg of lidocaine and was intubated.
- Upon entry to the procedure suite, he was noted to, again, be in pulseless VT. A code was called and ACLS was initiated. Because of refractory VT, stellate ganglion block was performed, and amiodarone therapy was initiated while undergoing placement of RCA stent.
- Following PCI, he was transferred to the cardiac ICU for continued care.

Post-Operative Timeline



DISCUSSION & REFERENCES

Discussion

Delirium following cardiac arrest and invasive cardiac procedures is common, especially in the elderly population. The use of dexmedetomidine infusion for the prevention and management of delirium in this patient population is unusual and research about its efficacy is ongoing. In the last two years alone, there have been multiple randomized control studies evaluating the effectiveness of dexmedetomidine infusion for the prevention and/or treatment of post-operative delirium. While the findings have been mixed, it remains the pharmacologic agent with the most robust evidence supporting its use in this clinical scenario. This case highlights the current conflicting evidence surrounding the management of post-operative delirium in critically ill elderly patients because our patient continued to suffer from significant, agitated delirium with psychotic features despite utilizing a dexmedetomidine infusion for six days in addition to several other pharmacologic and non-pharmacologic treatment modalities.

Post-operative delirium is difficult to manage, especially when attempting to balance competing comorbidities such as pain, concomitant psychiatric illness, and/or substance use disorders among others as these diagnoses may necessitate the use of multiple, centrally acting medications which have the potential to worsen delirium. Of course, leaving any of the aforementioned comorbidities untreated also increases the risk of post-operative delirium. Underscoring, again, the complexity of managing these patients and mitigating the morbidity and mortality associated with this diagnoses.

References

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