





Texas Children's Hospital®

Baylor College of Medicine

Sunrise Session Case
September 3, 2022

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Cardiac Critical Care Medicine
Texas Children's Hospital
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Admission History, MG

MG is a 5 y.o. female with PMHx of HLHS (DORV, AS, MA) and interrupted aortic arch type B initially cared for at outside institution:

s/p Norwood/Sano first week of life with interstage complicated: tracheostomy for prolonged intubation and G-tube with fundoplication at 1 month of life

Bidirectional Glenn at 6 months with SVC and LPA angioplasty and LPA stenting following

Admission History, MG

She then transferred care to TCH

Age 3 ½ years: Fenestrated extracardiac Fontan with tricuspid valvuloplasty and ASD enlargement with subsequent cath interventions/balloon angioplasty of the LPA stent

She has severely depressed RV systolic function and moderate to severe TR, and failure to thrive and was under evaluation for heart transplant in the setting of failing Fontan physiology.

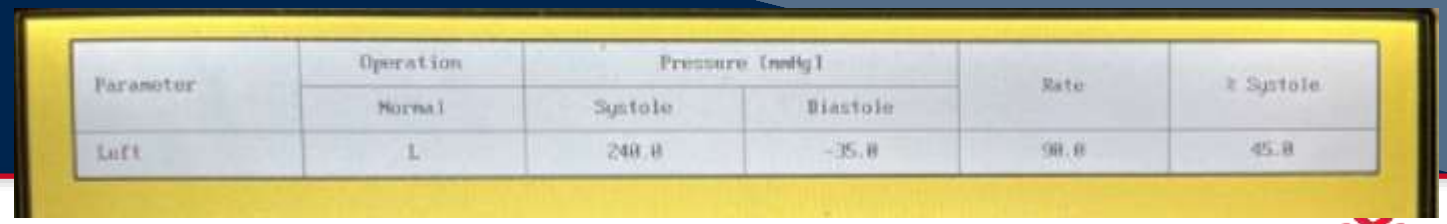
Recently admitted in decompensated heart failure and developing cardiogenic shock

Hospital History, MG

Initiated Milrinone and Epinephrine however, continued decompensation

BERLIN cannula placed 10 days later (atrial -→ aorta) to Rotaflow then 3 days later to 25cc BERLIN SVAD

Maintained on Milrinone, Sildenafil, diuretics, Bivalirudin for anticoagulation with Fontan pressures remaining 14-15



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Hospital History, MG

2 weeks later had developed severe pancreatitis with pseudocyst measuring 9.3 x 7.0 cm

Subsequent splenic artery pseudoaneurysm rupture, abdominal hemorrhage, and abdominal catastrophe with emergency exploratory laparotomy

Abdomen packed, left open for several days and drains placed and eventually closed on broad spectrum antibiotics with remaining retroperitoneal bloody drainage

Hospital History, MG

Continued with Berlin support with vasoactive support, tight fluid balance and pulmonary vasodilators

Slow recovery of abdominal process

Careful anticoagulation and high dose narcotic for pain control, continued antibiotics and additional fungal coverage

Within a week she was walking around and playful

Hospital History, MG

~2 weeks later had profound hypotension with mental status change, difficult to wake without focal neurologic findings, diminished urine output and AKI with developing coagulopathy

Working diagnosis: Overwhelming sepsis with DIC without response to escalating supportive therapies, all the cultures collected, antibiotics broadened, images ordered

“Circling the Drain”

Hospital History, MG

Careful review of medications contributing to AKI

Newly added *Voriconazole*

May interfere with many drug metabolism especially Methadone and narcotics

causing deeper sedation and hypotension

AKI allowing bivalirudin level increase and coagulopathy

“copycat” symptoms of sepsis

Hospital History, MG

Discontinued Voriconazole

Blood pressure improved, She woke up and acted normally

AKI improved; coagulopathy improved within 24 hours

Pain management re-escalated

Cultures remained negative

Hospital History, MG

Medication interaction identified

Early recognition avoided further decompensation and poor prognosis

Voriconazole will increase the level or effect of methadone by affecting hepatic/intestinal enzyme CYP3A4 metabolism.

Increased plasma concentrations of methadone have been associated with toxicity. Frequent monitoring for adverse events and toxicity related to methadone is recommended during coadministration. Dose reduction of methadone may be needed.