Empowering nurses to improve patient outcomes in cardiogenic shock

Barbara Maffre, RN

Introduction

Bedside nurses spend the most time with patients. Their assessment and interventions have the power to have an important impact on patient outcomes. Assessment, communication, prompt intervention and advocacy are valuable assets to ensure that the patient receives the best care possible.

Shock

Types of Shock

-Cardiogenic
-Hypovolemic
-Distributive
-Obstructive
-Right Ventricular

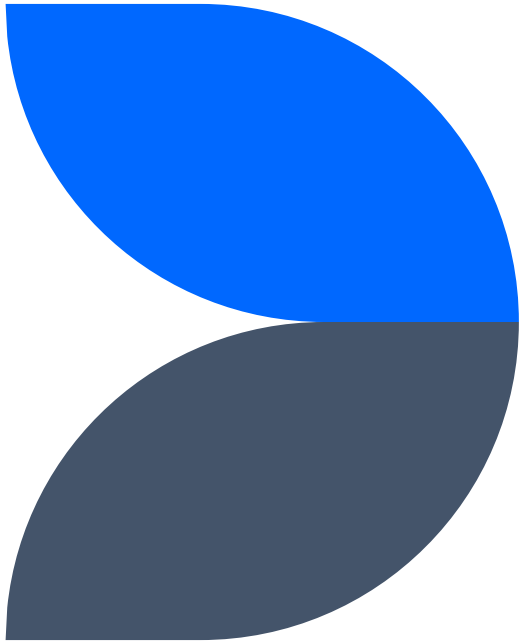


Table 1. Profiles of shock based on invasive hemodynamic assessment.

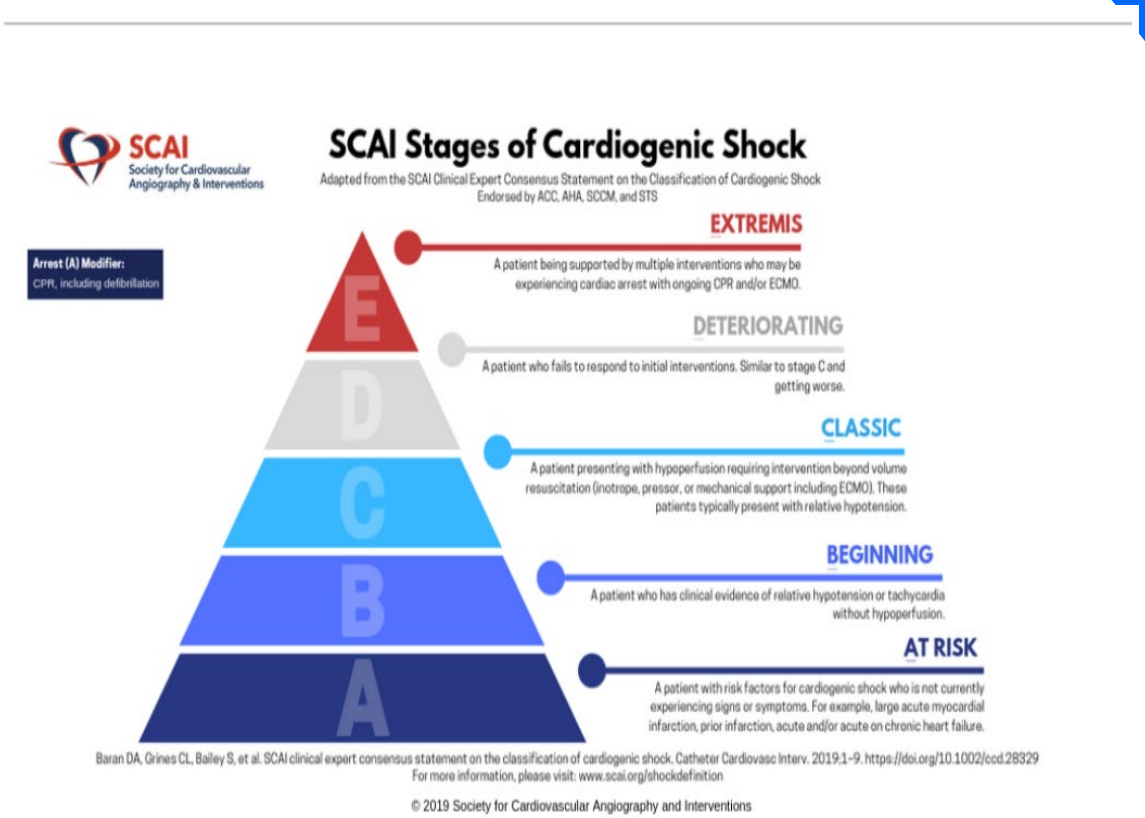
Cardiogenic	**Classic** (cold and wet): reduced CI, high SVRI, elevated PCWP **Mixed** (warm and wet): reduced CI, reduced SVRI, elevated PCWP **Euvolemic** (cold and dry): reduced CI, elevated SVRI, normal PCWP
Hypovolemic	Characterized by reduced intravascular volume; typically with reduced CI, elevated SVRI, and reduced PCWP
Distributive	Characterized by severe peripheral vasodilatation; typically with increased CI, reduced SVRI, and reduced PCWP
Obstructive	**Tamponade**: reduced CI, elevated SVRI, and elevated PCWP **Pulmonary**: reduced CI, elevated SVRI, and reduced PCWP
Right Ventricular	Reduced CI, elevated SVRI, reduced PCWP, elevated RAP, elevated RA:PCWP ratio, reduced pulmonary artery pulsatility, reduced PAPi, reduced RVSWI

(Jumean et al., 2022)

The Houston Shock Score

Variable		Points
Severity	SCAI A-C SCAI D, E	0 1
Hemodynamics	Classic Mixed & Euvolemic	0 1
Onset	Acute Chronic	0 1
Cause	Acute Treatable Other Causes	0 1
Kinetics	Stabilized Refractory/Worsening	0 2

(Jumean et al., 2022)



"The devil is in the details" is an idiom alluding to a catch or mysterious element hidden in the details; it indicates that something may seem simple, but in fact the details are complicated and likely to cause problems

Wikepedia

The Details

What are the main goals?

Identify cause of shock; fixable or not? What is the fix?

If MCS in place; temporary as a bridge to recovery or bridge to permanent support.

End organ support and preservation

Respecting patient wishes and beliefs

How do nurses contribute to the goal?

Prompt reporting of assessments, concerns, issues

Using tools available to improve patient status

Recognizing improvements and pushing towards those

Recognizing/reporting decline to adjust plan

Fascilitation of patient, family meetings with doctors to ensure we're all on same page

The devil inside

The relevant details, events and context must be concisely communicated to providers to allow timely intervention. This profoundly affects patient outcomes.

Increasing Acidosis

Increasing pressors

Decreasing urine output

Decreasing glucose

Decreasing hct

Increasing vent support

Digit or limb ischemia

Decreasing pulse pressure

Decreasing PA pulse pressure

Decreasing svo2

Decreasing CO/CI

Pressure injuries

GI Bleeds

N/V, TF intolerance

Sedation

Rhythm changes

Fever

Communication

Consider

Urgency-does provider need this info now vs can they discuss concerns after completing rounds or procedure or whatever they may be tasked with at the moment

Confidence-speak confidently about what you know, share evidence of issue and be open to discussion. Perhaps you are completely correct, perhaps you have missed something and can learn from this interaction. Escalate the issue if the issue is serious and you feel it's not been given the appropriate attention. Patient safety is paramount.

Advocate for your patient!

We have to fight for the patient because they can't fight for themselves. It's that simple.

Escalation of care-watch for and report signs of instability, decline; ask questions, make suggestions!

De-escalation of care due to progess/improvements throughout the shift, i.e. weaning ECMO, weaning MCS, weaning vent to extubation...don't just sit on these patients, test limits!

Aggressive PT, appropriate pain control

Coordinate patient and family meetings to discuss plan of care

Summary

Cardiogenic shock is a complex, rapidly evolving process. The recognition of symptoms and prompt intervention are key components of positive outcomes for patients. Nurses are uniquely positioned to have a great impact in these outcomes if we are vigilant, educated and a little outspoken.

Thank you

Barbara Maffre, RN

HFICU, Memorial Hermann TMC

Barbara.Maffre@memorialhermann.org

Reference

Jumean, M. F., Sriram, N., Gregoric, I. D. & Kar, B. (2022). Houston SHOCK: A practical scoring system incorporating cardiogenic shock dyanmic changes. Journal of Shock and Hemodynamics, 1(1). https://doi.org/10.57905/josh/21011112.