Classification of shock (pediatrics)

Classification of shock often describes the actual cause of the shock state, i.e. bleeding, trauma, sepsis etc. This terminology linked to the provoking cause is understandably possible to accept. However, using selected criteria, it is possible to determine the shock states of 5 main categories and distinguish:

- **hypovolemic shock**
- **distributive shock**
- **obstructive shock**
- **cardiogenic shock**
- **dissociative shock**

According to "Nelson Textbook of Pediatrics 2007", it is excluded from the group of distributive shock as a separate "septic shock". This is due to its mixed nature of pathogenesis, where, in addition to a distribution disorder, we find hypovolemia ("third spacing" = losses into the third space) and cardiogenic depression (influence of endotoxin, cytokines, etc.). Even apart from the above-mentioned division, this only proves that in the clinical picture we often distinguish *mixed shock*. It is a combination of two, sometimes even three basic types. One type usually predominates in this mixed picture. A typical example is traumatic shock, which is most often a combination of hypovolemic and distributive shock, but depending on the nature of the injury, it can also be cardiogenic or obstructive shock.

Hemodynamic determinants of shock states (Fuhrman, Zimmerman – Pediatric Critical Care, 1998)

TYPE OF SHOCK	Cardiac index	SHUT UP	MAP	Wedging pressure	CVP
Hypovolemic	↓	↑	↔ or ↓	↓↓↓	↓↓↓
Cardiogenic – systolic dysfunction	↓↓	↑↑↑	↔ or ↓	↑↑	↑↑
Cardiogenic – diastolic dysfunction	↔	↑↑	↔	↑↑	↑
Obstructive	↓	↑	↔ or ↓	↑↑	↑↑
Distribution	↑↑	↓↓↓	↔ or ↓	↔ or ↓	↔ or ↓
Sepsis - early stage	↑↑↑	↓↓↓	↔ or ↓	↓	↓
Sepsis - late stage	↓↓	↑↑	↓↓	↑	↔ or ↓

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Source

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