Cardiac tamponade (pediatry)

Cardiac tamponade is defined as *hemodynamically significant compression of the heart in the pericardial envelope*. The cause is transudate or exudate (*hydropericardium*), blood (*hemopericardium*) or gas in the pericardium (pneumopericardium).

The clinical presentation of tamponade is insidious, especially when it occurs against a background of an underlying cause such as malignancy, collagenosis, renal failure or pericarditis.

In the initial phase, the symptomatology is nonspecific. When CO/CI decreases, the symptomatology is similar to congestive heart failure, but there is no evidence of congestion on lung X-ray. Physical findings that are suggestive of tamponade are pulsus paradoxus, narrowing of pulse pressure, friction murmur over the pericardium or weakening of the oesophagus and distension of the jugular veins. The method of choice in diagnosis is echocardiography.

The symptomatology of cardiac tamponade is similar to congestive heart failure, but there is no evidence of congestion on lung X-ray. The peracute course of tamponade occurs under the picture of shock with the typical triad: hypotension, tachycardia, cyanosis.

If not promptly addressed (pericardiocentesis) electromechanical dissociation and death of the patient occurs. Pericardiocentesis is performed under echocardiographic control, only as a last resort blindly. The definitive solution, if needed, is surgical drainage of the pericardium.

Medical therapy cannot replace drainage, but can help us gain more time if pericardiocentesis or surgical drainage are not immediately available. We choose volum-expansion to maintain venoatrial gradients, and we administer inotropics, but these have little effect. Drugs such as diuretics or digoxin are contraindicated. If the patient is on UPV it is necessary to reduce PIP and PEEP.

References

Sources

- HAVRÁNEK, Jiří: *Šok*. (edited)

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