Cardiac tamponade (pediatrics)

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

The clinical manifestation of tamponade is insidious, especially when it appears against the background of underlying causes such as malignancies, collagenoses, renal failure, or pericarditis.

In the initial stage, the symptomatology is non-specific. With a decrease in CO/CI, the symptomatology is similar to congestive heart failure, however, there are no signs of congestion on the X-ray of the lungs. Physical findings that indicate tamponade are pulsus paradoxus, narrowing of pulse pressure, friction murmur over the pericardium or attenuation of echoes, 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, however, there are no signs of congestion on X-ray of the lungs.The peracute course of tamponade takes place under the image of shock with a typical triad: **hypotension, tachycardia, cyanosis**.

If there is no immediate solution (pericardiocentesis), electromechanical dissociation and death of the patient occur. We perform pericardiocentesis under echocardiographic control, only in extreme cases blindly. The definitive solution, if needed, is surgical drainage of the pericardium.

Medical treatment cannot replace drainage, but it can help us buy more time if pericardiocentesis or surgical drainage is not immediately available. We choose volume expansion that maintains venoatrial gradients, we administer inotropes, but these have little effect. Medicines such as diuretics or digoxin are contraindicated. If the patient is on UPV, it is necessary to reduce PIP and PEEP.

Links

Source

- HAVRÁNEK, Jiří: *Shock*. (upraveno)

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