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Cardiac Tamponade
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Introduction

What is the Topic?
The topic the author chose to research is cardiac tamponade. Cardiac tamponade occurs when fluid builds up in the pericardial cavity, which is the cavity that surrounds the heart. Cardiac tamponade can occur due to various reasons, including myocardial infarction, trauma, and pericardial effusion. The signs and symptoms of cardiac tamponade can be severe and can lead to death if not treated promptly.

Underlying Pathophysiology

Cardiac tamponade occurs as fluid accumulates in the pericardial sac and causes increased compression on the heart. This reduces the heart's ability to fill with blood and affects the heart's ability to pump blood. The increased compression on the heart can lead to decreased cardiac output, shock, and potential death.

Significance of Pathophysiology

The pathophysiology of cardiac tamponade is important because it can be caused by various conditions, including myocardial infarction, trauma, and pericardial effusion. Understanding the pathophysiology of cardiac tamponade is crucial for nurses and healthcare providers to recognize the signs and symptoms and provide timely and effective care.

Research Topic

“Cardiac tamponade (CT) is a life-threatening condition and a medical emergency characterized by pathophysiologic accumulation of fluid in the pericardial sac that compresses the heart. CT is associated with acute cardiac filling, and reduces cardiac output” (Schub & Boling, 2015, p.11). Fluid builds up in the pericardial sac, which then causes increased cardiac pressure and decreased compression of the heart. Cardiac tamponade results from rapid accumulation of even small amounts of fluid. “A rapid accumulation of pericardial fluid will quickly compress the heart, resulting in decreased cardiac output, shock, and ultimately, if cardiac tamponade” (Skeff & Kloss, 2012, p. 264).

Implications for Nursing Care

Implications for nursing care include close monitoring of the patient. After placement of a pacemaker or a central venous line, a chest-x-ray needs to be obtained to ensure correct placement prior to using them. The chest-x-ray would also rule out cardiomegaly. Vital signs need to be obtained at least every four hours to ensure patient stability. Nurses also need to be knowledgeable of equipment used, such as chest tubes and pleurovacs.

Conclusion

Cardiac tamponade is a life-threatening emergency that can result in death if not treated promptly and effectively. If a patient presents with hypotension, dyspnea, muffled heart sounds, and jugular vein distention, chest imaging such as an x-ray should be obtained as soon as possible. An electrocardiogram would also be useful in determining if there is a presence of a pericardial effusion. Nurses, doctors, and other healthcare providers need to be knowledgeable of the pathophysiology of cardiac tamponade to intervene quickly and prevent death caused by cardiac tamponade.

References


Figure 1. Chest-x-ray showing cardiac tamponade.

Figure 2. Cardiac tamponade due to hemopericardium

Other References


Other Texts


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