Angioedema: ACE-Inhibitors Adverse Reaction

Jesse VanDyne
jesse.vandyne@otterbein.edu

Follow this and additional works at: https://digitalcommons.otterbein.edu/stu_msn

Part of the Critical Care Nursing Commons, and the Family Practice Nursing Commons

Recommended Citation
VanDyne, Jesse, "Angioedema: ACE-Inhibitors Adverse Reaction" (2017). Nursing Student Class Projects (Formerly MSN). 245.
https://digitalcommons.otterbein.edu/stu_msn/245

This Project is brought to you for free and open access by the Student Research & Creative Work at Digital Commons @ Otterbein. It has been accepted for inclusion in Nursing Student Class Projects (Formerly MSN) by an authorized administrator of Digital Commons @ Otterbein. For more information, please contact digitalcommons07@otterbein.edu.
**Introduction**

Angiotensin-converting enzyme inhibitor (ACE) medications are one of the leading causes of angioedema in the United States, also known as ACE-R A, with a prevalence of 0.7% (Soliman et al., 2014; Wynn & Maxey, 2012). ACE inhibitors are among the most commonly prescribed medications worldwide because they are indicated for the management of hypertension, congestive heart failure, myocardial infarction, diabetic nephropathy, and chronic kidney disease (Chan & Solomon, 2015, p. 207). According to Spencer (2016), there are an estimated 40 million people taking ACE inhibitors for either hypertension or congestive heart failure (CHF). Angioedema is estimated to occur in 0.1%-0.7% of patients on ACE inhibitor therapy. Of those who present to the emergency department with angioedema, 31% of cases are attributed to ACE. Additionally, one study concluded that African-Americans are three times more likely to develop ACE-R A within six months of starting ACE inhibitor therapy (Spencer, 2016).

**Implications for Nursing Care**

ACE inhibitor angioedema is a relatively common side effect. These side effects could be seen in all clinical care settings. As the bedside nurse, it is important to be able to recognize the signs and symptoms of ACE-R A quickly. As an Advanced Practicing Nurse, it will be imperative to know these patients will not present like a typical allergic reaction i.e., itching, urticaria. These patients will not be treated in the same allergic reaction manner. Emergency room nurses need to be able to recognize these patients as immediate life threats and should be seen immediately. Patients seen outside of the Emergency room will need to be taken to the Emergency room by EMS. Advanced practice nurses will need to be aware of the risk factors involved in prescribing an ACE to their patients. If the risk factors are too high, the provider will need to consider another medication. The early warning sign of a reaction i.e., throat swelling, is a critical sign to consider. All patients will need to be educated extensively about the signs and symptoms of angioedema. Written literature will be very helpful for the patient to take home.

**Conclusion**

ACEs are very effective in treating chronic diseases. APPs must be vigilant in screening their patients as well as their family members (if possible) before prescribing these medications. Nurses and APPs will need to provide educational material to patients. The health and wellness of each patient is essential. This author wants to educate the community on the signs and symptoms of ACE-R A as well as the pathophysiology.