D6.3: A Biobehavioral Approach to Stress and Inflammation in COPD

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Introduction: COPD is a complex disease. There are numerous cellular, molecular and psychological factors that contribute to its severity; however, few studies have evaluated stress and inflammation in COPD from a biobehavioral perspective. Data indicate that persons with COPD experience persistent local and systemic inflammation and can be psychologically distressed. Stress and inflammation result in poor health outcomes. The significance is further magnified as morbidity and mortality from COPD is expected to increase substantially by 2020, making COPD a significant healthcare challenge in the next ten years. The purpose here is to discuss a biobehavioral approach to understanding stress and inflammation in COPD.

Method(s): Medline and CINHAL databases were searched using key words (e.g. COPD, stress, inflammation) and studies utilizing biomarkers (Interleukin-1,6, Tumor Necrosis Factor-α, and C-Reactive Protein) included. Criteria included: peer-reviewed comprehensive reviews and/or primary research (cell, animal, and human models) published in English after 1990. Articles were critiqued using the biobehavioral framework proposed in the overview.

Results: The presenter will discuss data related to stress and inflammation and their affect on COPD health outcomes. Numerous studies describe an increase in inflammatory biomarkers (from serum, tissue, sputum) and stress in persons with COPD compared to smokers without COPD and healthy controls. Exacerbations of COPD are characterized by heightened inflammation and distress which negatively impact health outcomes—increased dyspnea, decreased lung function, quality of life and exercise tolerance.

Discussion & Conclusions: The purpose of this presentation is to discuss a biobehavioral approach to understanding inflammation and stress in COPD. For the clinician, this knowledge can translate into improved primary prevention programs and enhanced diagnostic and treatment strategies. For the nurse scientist, a biobehavioral approach allows for the development of tailored interventions and provides depth and breath in understanding COPD. This knowledge translates to a better understanding of individual differences in response to inflammation and stress in COPD.
Abstract History:
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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