Cured Meat as a Potential Risk Factor of Chronic Obstructive Pulmonary Disease

Gulshan Bano Ali[1], **Savera Aziz Ali**[2] **and Sumera Aziz Ali**[3*]

[1]*Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, Pakistan*

[2]*Department of Pediatric Intensive Care Unit, Aga Khan University Hospital, Karachi, Pakistan*

[3]*Department of Community Health Sciences, Aga Khan University Hospital, Karachi, Pakistan*

[*]**Corresponding author:** Sumera Aziz, Department of Community Health Sciences, Aga Khan University Hospital, Karachi, Pakistan, Tel: 92134864837; E-mail: Sumera.ali@aku.edu

Receive date: August 23, 2018; **Accepted date:** November 27, 2018; **Published date:** November 29, 2018

Commentary

Chronic Obstructive Pulmonary Disease (COPD) refers to a group of diseases that cause blockage and breathing-related problems. It includes emphysema, chronic bronchitis, and in some cases asthma [1]. An estimated 64 million people have COPD worldwide in 2004 and more than 3 million people died in 2015, which is equal to 5% of all deaths globally [2]. COPD prevalence rates for the individual countries range from 3.5% (Hong Kong and Singapore) to 6.7% (Vietnam) [3]. primary cause of COPD is exposure to tobacco smoke (either active smoking or secondhand smoke) [4]. Other risk factors include exposure to indoor and outdoor air pollution and occupational dusts and fumes. Although cigarette smoking is the predominant risk factor for COPD, many smokers do not develop COPD [5]. Hence, relatively little attention has been paid to other factors, such as diet, and how they might COPD risk. Recent studies have suggested that interestingly processed or cured meat intake may adversely lung function and increase risk of developing COPD and some of the studies have also tested the hypothesis of curing as a risk factor for COPD [6]. Curing is the treatment of muscle meat with common table salt and sodium nitrite [7]. It is applied in the manufacture of sausages, beef, and poultry and products. In past, this technique was used for preservation and to extend the storage life of food, while now a days it is mainly used to achieve a pink- red color as well as a typical in processed meat products [7].

High cured meat intake is a risk factor not only for cancer, but also for several chronic diseases and all-cause mortality [8]. deleterious health of high cured meat intake have been increasingly observed [9]. Regarding lung health, frequent cured meat intake is associated with lung cancer, decreased lung function and COPD symptoms [10,11]. Cured meats have various compounds added to meat products as preservatives and color among which the most are nitrites. Nitrites generate reactive nitrogen species that can increase processes in the airways and lung parenchyma causing DNA damage, inhibition of mitochondrial respiration and nitrosative stress. long-term persistence of nitrosative stress may contribute to the progressive worsening of pulmonary function and may be associated with the pathogenesis of COPD [12].

Cured meat itself is not the culprit but the nitrites found in it generate reactive nitrogen components which damages the lungs. For example, a study done on adult population of USA (NHANES) found that adjusting for multiple risk factors, individuals who ate cured meat consumption 14 times/month or more had a lower FEV1 (-110 mL; p for trend<0.001) and FEV1/FVC (-2.13%; p for trend<0.001) compared with those who never ate cured meats [13]. also found that each time /month increase in cured meat consumption was associated with a 3.85 mL decrease in FEV1 and FEV1/FVC [13]. Similarly, a prospective cohort study of health professionals (men) conducted in the USA also supported the same evidence that the consumption of cured meats was positively associated with the risk of newly diagnosed COPD (for highest *vs.* lower intake: relative risk=2.64. 95% (1.39-5.00; p-trend=0.002) [14]. similar results were found in a similar study conducted in women [15]. In addition to this, one more study conducted among nurses of USA found a positive association between processed meat and COPD. authors found a strong, statistically dose-response relationship between the intake of processed meat and risk of incident COPD [6]. was adjustment for potential confounders, though the association decreased [6].

2. World Health Organisation (2015) Chronic obstruct}p obx}p a