

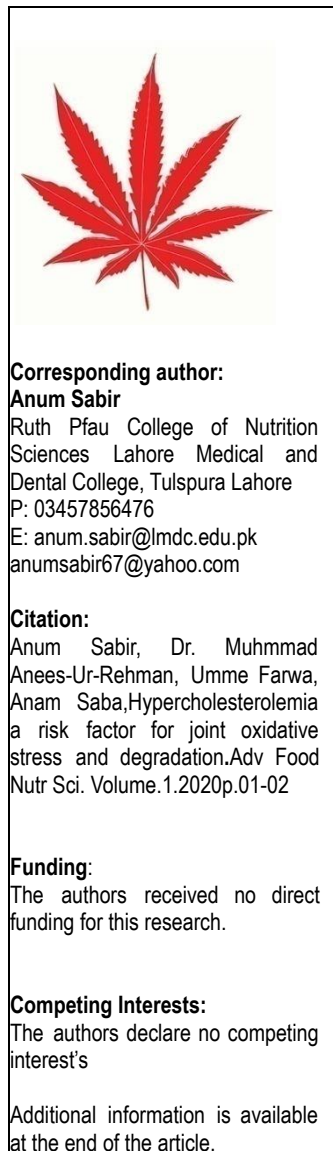


Conference Abstract
http://dx.doi.org/10.21065/AdvFoodNutriSci.5.2.2020

10th Pak Pharma & Healthcare Expo

International Conference on Pharma, Food & Healthcare

Tuesday –Thursday, February 11-13, 2020
Expo Center, Lahore, Pakistan.



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Citation:

Anum Sabir, Dr. Muhammad
Anees-Ur-Rehman, Umme Farwa,
Anam Saba, Hypercholesterolemia
a risk factor for joint oxidative
stress and degradation. Adv Food
Nutr Sci. Volume.1.2020p.01-02

Funding:

The authors received no direct
funding for this research.

Competing Interests:

The authors declare no competing
interests

Additional information is available
at the end of the article.

Conference Abstract

HYPERCHOLESTEROLEMIA A RISK FACTOR FOR JOINT OXIDATIVE STRESS AND DEGRADATION

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ABSTRACT

Hypercholesterolemia is related to high level of blood cholesterol level (> 200mg/dl). A number of factors can assist to increase the blood cholesterol levels like unhealthy food, physical inactivity, genetics, some medications etc. Increased blood cholesterol levels initiate the inflammation process by enhancing oxidation stress at chondrocytes, alter the activities of antioxidant enzymes and overwhelm the mitochondrial oxidative stress defiance. Chondrogenic differentiation and proper functioning of chondrocytes both depends on cholesterol. Abnormality regarding cholesterol homeostasis at chondrocytes can leads the apoptosis of cells due to the accumulation of cholesterol and fatty acids at the outer layer of the cartilage. Mitochondrial abnormal functionality at chondrocytes shows apoptotic genes like (bax,bak,bid) at knee cells that causes the cell death and autophagy naturally because abnormal cells seems to the human body as impaired and this type of cell death remains irreparable. Increased oxidative stress leads to the enhanced subcondral done dysfunction, synovial inflammation, cartilage degradation while decrease in matrix synthesis. Bilateral osteoarthritis is strongly related with obesity than unilateral osteoarthritis. Anti-inflammatory foods are encouraged than inflammatory foods because they have ability to quench the free radicals and to lower the cholesterol levels.

Key words: Hypercholesteremic, Oxidative stress, Chondrocytes, Inflammation.