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Cardiometabolic Risk in Young Adults: An Emerging Epidemic Often Ignored

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A Shifting Epidemiological Landscape:

Cardiometabolic disease is not a prerogative of older age anymore. There is a growing prevalence of early signs of metabolic dysfunction among young adults, such as insulin resistance, central obesity, dyslipidemia, and high blood pressure. This change is indicative of a critical disconnect in preventive healthcare, whereby early risk has not been given the necessary attention despite there being apparent signs of upward prevalence [1].

Early Pathophysiology and Silent Onset:

The development of cardiometabolic risk is insidious. The majority of young people do not have any symptoms, but the metabolic and vascular alterations take place. Subclinical changes like endothelial dysfunction, arterial stiffness, and premature atherosclerosis usually start many years before the clinical manifestation of the disease appears. This silent pathology renders early detection a delicate and necessary process [2].

Lifestyle Change and Behavioral Determinants:

This new epidemic revolves around modern lifestyle patterns. Lack of physical activity and extended screen time, coupled with growing intake of high-energy and low-nutrient diets, has become widespread. Such habits facilitate obesity, and obesity is one of the primary causes of metabolic and inflammatory imbalances. Also, psychological stress and disturbed sleep patterns contribute to the increase in metabolic imbalance among the youth [3].

The Rising Burden in Low & Middle-Income settings:

The issue is exacerbated by rapid urbanization and insufficient preventative health facilities in countries such as Pakistan. The youthful adults are becoming more exposed to unhealthy settings, yet are not targeted by the regular screening programs. The myth that young people have insurance against chronic disease is still preventing early diagnosis and intervention [4].

Bio-Markers of Early Cardiometabolic Risk:

In the heart of the cardiometabolic dysfunction lies insulin resistance, which is usually accompanied by visceral adiposity. The adipose tissue is an endocrine organ that produces pro-inflammatory cytokines, including interleukin-6 and tumor necrosis factor-alpha. Even without overt disease, this long-term state of chronic inflammatory condition adds to metabolic dysregulation, endothelial damage, and expedited atherogenesis [5].

Poor Healthcare and Prevention:

The healthcare systems are still very reactive and place emphasis on management of the set disease and not on its prevention at an earlier stage. The screening guidelines do not pay much attention to young adults, and the clinical experience may not be keen on cardiometabolic screening in asymptomatic youth. This is a lost chance to act at a critical and changeable stage of disease progression [6,7].

The Policy Reform:

To solve this epidemic, one will have to switch to active prevention. Body mass index, waist circumference, blood pressure, glucose, and lipid levels are the most important risk indicators that must be regularly measured in young

adults. Policy on public health should facilitate healthier food conditions, more physical exercise, and Behavior modification. Both schools and the place of work can be used as a strategic point of early intervention [8-10].

CONCLUSION

Young adults face a rapidly growing public health risk that is under-recognized and cardiometabolic. It is too young and silent and requires emergent action. As it becomes a continuous trend, the burden of chronic diseases, premature cardiovascular incidents, and high healthcare system stress will increase without timely intervention. It is critical to focus on the early detection and preventive care, as well as structural reforms in health, to reverse this trend and protect future generations.

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