Cardio tissue, are additional players in the development

Cardio vascular problems are main leading cause of death and it isthe most common cause of mortality due to non-communicable disease likeMyocardial infarction, endocarditis and others associated with cardiovasculardisease. Mortality due to CVS is common in developed countries as well it ismain cause of triple burden of disease in developing and middle incomecountries. Obesity , hypertension, dyslipidemia are important health problem that has reachedepidemic proportions worldwide. Several studies of evidence has highlighted analarming association between childhood, adolescent, adult obesity and thedevelopment of cardiovascular disease. Increasebody weight as compared to the mean body weight of that age group during childhood, as well as in adult leads to metabolic and inflammatory alterations, which inturn may cause changes in the arterial wall and contribute in developing of cardiovascular events during adulthood. Manymetabolic and inflammatory factors seem to be implicated in the pathogenesis ofatherosclerosis.

In particular, insulin resistance(IR) represents an important link between obesity and the associated cardiovascularrisk and it has been suggested as one of the first mechanisms involved in thedevelopment of endothelial dysfunction in obese adult. In addition, oxidative stressand inflammatory reaction at molecularlevel, related to an increased adipose tissue, are additional players in thedevelopment of the atherosclerotic plaque. The main aim of this study wasto investigate is there any association between the TG: HDL-C ratio andcardiovascular risk factors as well as early signs of vascular damage in adult. Literature Review: Areview of literature conducted to identify what is origin of cardiovasculardiseases. What kind of interventions

has been undertaken for early diagnosticapproach of cardiovascular risk factors in adult to improve quality of lifeamong adults.

Literature review is done through PUBMED, HIGHWIRE, BMJ journals. Keywords: High Density lipoprotein, cardiovascular disease, TG/HDL Ratio, Obesity. Lipidmetabolic disorders are proven pathogenesis of atherosclerosis and any defectin lipid disorders can increase risk for cardiovascular disorders. Elevatedserum lipids level increasing in European, western countries and as well as inAsian Population. High level of Low density Lipoprotein cholesterol (LDL-C) iswell established in Cardio vascular disease, while role of High densitylipoprotein (HDL-C) and triglycerides role is controversial. Some studydemonstrates that hypertriglyceridemia is an independent factor cardiac diseaseand may be proven stronger risk factors for the heart disease. InitiallyTriglycerides and HDL ration was proposed by Gazeino et al and it was suggestedthat it is highly predictive independent factor for cardiovascular disease. iCardiovasculardisorders are basically disorders associated with heart and blood vessels andin heart it is mainly concerned with coronary heart disease, cerebrovasculardisease, rheumatic heart disease and other condition.

Four out of fivecerebrovascular diseases are due to heart attack and strokes. iiInglobal burden of disease estimate that cardiovascular disease are the leadingcause of mortality almost 17. 7 million deaths globally that is almost 30% of global death, Amongwhich 32% of female while in 27% of male died due to cardio vascular disease in2004. iii80% of all CVD death due to heart attack and stroke.

Cardiovascular disease is the leading cause of death worldwide and itcauses 47% of all deaths in Europe. Most of cardiovascular deaths are causedby coronary heart disease , and CHD is the single most common cause of death inthe in Europe and in United states. ivCoronaryheart disease has many background risk factors are stroke, peripheral arterydisease and aortic disease which can cause mortality due to CHD.. Many effortshas been made to decrease the prevalence of CHD through modification inlifestyle and early medical intervention, and CHD mortality has fallen in manyEurope during the last decades. CHD is however main causes of premature deathin Europe accounting for about 30% of deaths before the age of 65 years. vThere is therefore still a need for more research on coronary heart disease toallow for more effective preventive measures. Atherosclerosis is thepredominant cause of CVD, especially CHD.

Atherosclerosis is pathologicalfeature involved in CVD, it represents a continuum, multifactorial in aetiologybeginning with injury to the endothelium covering the inside of the arterialwall. Lipid deposit in macrophages leads to formation of foam cells which inturn degenerates. viThis leads to extracellular deposition of lipid rich plaques in the artery wall. The lipid deposition is due to accumulation and by pathological proliferation of smooth musclecells and infiltration and deposition of macrophages and other inflammatorycells in the arterial wall. The atherosclerosis leads to narrowing of thearterial lumen and eventually limitation of blood flow. In advanced stages ofatherosclerosis, formation of a fibrous cap covering the atherosclerotic plaqueforms a vulnerable barrier between the plaque and the blood. According tocurrent knowledge, most acute CHD events are caused by

rupture of plaques withrelatively high lipid content and thin fibrous cap, called unstable plagues. It is estimated that 54% of deaths from non-communicablediseases in the Eastern Mediterranean Region are due to cardiovasculardiseases.

Deaths attributed to cardiovascular diseases (of totaldeaths) range from 49% in Oman to 13% in Somalia. The prevalenceof cardiovascular diseases is due to sedentary lifestyles and common riskfactors, such as hypertension (ranging from 28% in the UnitedArab Emirates to 41% in Libya and Morocco); diabetes (ranging from 4%in Islamic Republic of Iran to 19% in Sudan) and hypercholesterolemia(ranging from 14% in Lebanon to 52% in Islamic Republic of Iran). while triglyceridesto HDL –C ratio is good predictive marker for insulin resistance and for earlyassessment of cardiovascular disease. Triglycerides to HDL-C ratio arecalculated by triglycerides level divided by HDL-C value.

In some studiesTG/HDLC ratio less than 0. 87mmol/l is consider ideal while value above then1. 74 is too high and high risk for coronary artery disease. In one studyTG/HDLC ratio is considered independent predictable factor for coronary arterydisease. viiEvidence has been presented that the plasma concentration ratio of triglyceride(TG)/HDL-cholesterol (HDL-C) may provide a relatively simple way to identifyapparently healthy insulin-resistant persons with increased cardio metabolicrisk. However, there is evidence that the actual values of the ratio that bestidentifies such individuals will vary as a function of racial/ethnicbackground. More recently, it has also been shown that the most useful TG/HDL-C cut-point to identify cardio metabolic risk are

not the same in men andwomen. viiiIt is also considered an easy and rapid indicator to obtain, especially in thecontext of primary health care.

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