

## **Introduction:**

Cardiovascular disease (CVD), which includes coronary heart disease (CHD), stroke, and peripheral vascular disease, is far and away the leading cause of death in the United States and most developed countries, accounting for more than 900,000 deaths annually in the United States alone. Mortality rates for CVD and CHD in men and women and in blacks and whites have fallen in most countries by 24 to 28 percent since 1975, although the decline has slowed since 1990. Over the 30 years, approximately 45 percent of this reduction is attributable to improvement in medical therapies for coronary disease; the remaining 55 percent is due to risk factor reduction, particularly a decline in smoking and treatment of hypertension. Most of the recent changes, however, seem related to treatment rather than primary prevention (*Kuulasmaa et al., 2000*).

Many of the important risk factors for cardiovascular disease are modifiable by specific preventive measures. In the worldwide INTERHEART study of patients from 52 countries, nine potentially modifiable factors accounted for over 90 percent of the population attributable risk of a first MI. These included smoking, dyslipidemia, hypertension, diabetes, abdominal obesity, psychosocial factors, daily consumption of fruits and vegetables, regular alcohol consumption, and regular physical activity (*Yusuf et al., 2004*).

No other life-threatening disease is as prevalent or expensive to society, and persons with CVD are likely to die from their disease. Longevity has increased and age-specific death rates from cardiovascular disease, coronary heart disease, and stroke have declined since 1975, although at a slower rate since 1990. The number of CVD deaths remains high, and over the past two decades approximately one million Americans a year have died from CVD (*Cooper et al., 2000*).

A variety of factors, often acting in concert, are associated with an increased risk for atherosclerotic plaques in coronary arteries and other arterial beds (*Wilson, 1994*). Risk factor assessment is useful in adults to guide therapy for dyslipidemia, hypertension, and diabetes, and multivariate formulations can be used to help estimate risk for coronary disease events (*Wilson et al., 1998 and Ridker et al., 1999*).

Based upon the absolute, relative, and attributable risks imposed by the various risk factors, concepts of "normal" have evolved from usual or average to more optimal values associated with long-term freedom from disease. As a result, optimal blood pressure, blood glucose, and lipid values have been revised downward in the past 20 years (*Third report of the National Cholesterol Education Program (NCEP), 2002 and Chobanian et al., 2003*).

It has been asserted that approximately one-half of all patients suffering a CHD event have no established risk factors other than age and gender, a claim that has contributed to efforts to identify other markers of cardiovascular risk (*Greenland et al., 2003*).

A comparison of results from sequential reports from the National Health and Nutrition Examination Survey (NHANES) has shown that the prevalence of obesity (body mass index  $> 30 \text{ kg/m}^2$ ) increased dramatically in the United States between 1960 and 2000 (15 to 30 percent). Not surprisingly, there was an associated increase in diagnosed diabetes (1.8 to 5.0 percent) that was most prominent in obese subjects (2.9 to 10.1 percent) (*Gregg et al., 2005*).

## **Aim of the work**

This study was conducted in order to find out the atherogenic risk factors and the incidence of the different risk factors among patients with coronary artery disease in Kalioubia Governorate aiming at identification of the risks and reduction of mortality and morbidity of this disease..