Does Warfarin affect cholesterol level?!

There is no direct relationship between warfarin and the elevation of cholesterol level, but there is not defined frequent side effect of warfarin which is cholesterol embolus syndrome and blue toe syndrome.

Cholesterol embolus syndrome (CES):

CES (also referred to as cholesterol crystal embolization, atheromatous embolization or atheroembolism) occurs when cholesterol crystals and other contents of an atherosclerotic plaque embolize from a large proximal artery to smaller distal arteries, causing ischemic end-organ damage. CES mainly cause Atheroembolic renal disease A condition affecting ± 4/10,000, more common in ♂ ≥ age 60, in which showers of cholesterol and debris from atherosclerotic plaques embolize to renal arterioles, blocking blood flow, resulting in renal infarction and possibly renal failure. Risk factors ASHD, DM, HTN, smoking, obesity, and hyperlipidemia.

Cholesterol embolization syndrome has a variety of clinical presentations. Cholesterol emboli originating in the descending thoracic and abdominal aorta may lead also to gut ischemia, and emboli to the skeletal muscles and the skin. Dermatologic manifestations (most commonly livedo reticularis and blue toe syndrome) are usually confined to the lower extremities but may extend to the abdomen and the chest.

Acute digital ischaemia caused by the coumarin anticoagulant warfarin was first described by Feder and Auerbach. It has been suggested that use of anticoagulants prevents stabilization of the ulcerated plaque surface by clotting and leads to gradual loss of the protective fibrin layer overlying the plaque, which permits cholesterol-containing debris to be shed into the circulation. Lodgement of cholesterol clefts in small arteries results in an inflammatory reaction involving macrophage and giant cell infiltration.

The Clinical manifestations of CES include constitutional symptoms (fever, anorexia, weight loss, fatigue and myalgias), signs of systemic inflammation (anemia, thrombocytopenia leukocytosis, high erythrocyte sedimentation rate, elevated levels of C-reactive protein, hypocomplementemia), hypereosinophilia, eosinophiluria, acute onset of diffuse neurologic deficit, amaurosis fugax, acute renal failure, gut ischemia, livedo reticularis and blue-toe syndrome.

CES may occur spontaneously or after an arterial procedure. There is no specific laboratory test for CES. Retinal exam demonstrating Hollenhorst plaques supports the diagnosis of CES. Biopsy of target organs (usually skin, skeletal muscles or kidneys) is the only means of confirming the diagnosis of CES. Treatment consists of supportive care and general management of atherosclerosis and arterial ischemia.

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