

CORONARY ARTERY DISEASE PICTURE IS TAINTED BY MOBILE USAGE

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Abstract

Doctors at the University Neurology Clinic in Freiburg, Germany, carried out tests by strapping mobile phones to the heads of ten young volunteers. They found that blood pressure (BP) increased after 35 minutes of exposure to the mobile phones. The scientists think that the increase BP probably results from constriction of the arteries caused by the radiofrequency (RF) electromagnetic fields. This report prompted us to consider an observation with patients in similar terms of pathology.

In our setting of the Institute of Cardiovascular Diseases from April 2003 till December 2004 we had taken a meticulous history from the known coronary artery disease patients (n = 76) already documented angiographically. Those with left circumflex artery having > 95% stenosis and left main coronary artery > 90% stenosis with more than average of 64 minutes exposure to low-power microwave-frequency signal transmitted by the antennas on handset within eleven hours of switching on the mobiles in the morning had experienced typical angina like symptoms even during rest after 45 minutes of simple (no office or domestic stress inducing elements to disturb existing psychological make-up) conversation. Though the pain mimics localized costochondritis yet the ambulatory BP and electrocardiographic recordings suggest definitive changes of a rise of (average) 16/9 mm Hg and T wave changes magnified x 15 respectively corroborating with the patient history card timing. Perhaps the subtle BP changes affect the endothelial dysfunctional activity in the compromised coronaries and the acute exposure to RF fields of mobiles may modulate the oxidative stress of free radicals in the erythrocytes by enhancing lipid peroxidation and reducing the activation of superoxide dismutase (SOD), total glutathione peroxidase (GSH-Px) and ultimately transiently altering the rheology / tissue oxygen transport. Those using 'hands-free' mobile phones (i.e. mobiles with a wired ear attachment) keeping the mobiles with the keypads facing the chest wall distinctly observed a local heating of > 1.4°C upto nearly 3 cm of the precordium (within just < 5 minutes of initiating a call) which they attributed as a queer uneasy feeling probably relating to the known existing status of ischaemic heart disease. This discomfort quickly disappears with application of an ice gel and finger percussion massage on the culprit spot for 2 to 3 minutes but otherwise continues indefinitely occasionally for more than 8 hours.

Hence the technology of the make of the mobile, its attachments, the distance of the base station and consideration of minimum interference with the human health system needs to be addressed immediately.