

Occurrence of CNS symptoms (like headache, anxiety, hearing loss) and hypertension in extensive cell phone users v/s non cell phone users

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According to the International Telecommunication Union there were an estimated 5.3 billion subscriptions globally by 2010. As they have now become an essential part of business, commerce and society it has become extremely important for us to know the health hazards caused by them. Most phones emit radio signals at Specific Absorption Rate levels of between 0.5-1W/kg. SAR is a measure of rate of radio energy absorption in body tissue. The SAR limit recommended by International Commission of Non Ionizing Radiation Protection is 2 W/kg². There is a consistency seen between the RF radiations and the health problems like dizziness, fatigue, headache, sleep disturbances, impairment of short term memory, an increase in frequency of seizures in epileptic children, brain tumors and hypertension. Many studies have been done in other countries regarding the health hazards due to cell phones but data from our country is lacking. This cross sectional study was conducted in Maulana Azad Medical College and the associated Lok Nayak Hospital. Patients coming to OPD and their attendants were interviewed. Students and hospital staff were also undertaken in the study. A total of 50 mobile phone users and 50 non mobile phone users were undertaken in the study. Extensive mobile users: defined as those using mobile phones for more than 4 years and at least one hour a day.

Results

1) Out of a total of 35% subjects showing headache i.e. 35, 20% i.e. 20 are cell phone users while 15% i.e. 15 are non users

2) Among extensive cell phone users using Hamiltonian Anxiety Scale (HAM-A) 12% i.e. 6 users had mild anxiety, 14% i.e. 7 had moderate anxiety, 6% i.e. 3 had severe anxiety while 68% i.e. 34 had no anxiety. Among non cell phone users we saw that 16% i.e. 8 people suffered from mild anxiety, 4% i.e. 2 from moderate, 4% i.e. 2 from severe while 76% i.e. 38 non users had no complaint of anxiety.

3) When evaluated using a questionnaire validated by National Institute on Deafness and other Communication Disorders (NIDCD), 58% i.e. 29 cell phone users were found to have hearing loss while 42% i.e. 21 users had no problem in hearing. Among non cell phone users only 14% i.e. 7 people were found to have hearing loss and 86% i.e. 43 of them had no problem.

4) Among extensive cell phone users 8% i.e. 4 users had hypertension while 92% i.e. 46 had no hypertension. Among non cell phone users we saw that 18% i.e. 9 people suffered from hypertension while 82% i.e. 41 had no hypertension.

Implications

This will help us to provide social and health awareness in using these devices. A reduction in their use can help in preventing precipitation of various clinical conditions. Moreover, a decreased use of cell phones could be advised as a part of therapy in patients suffering from CNS disorders causing hearing and vision loss, cervical spondylosis, migraine, hypertension, etc. A restricted use of mobile phones could be advised to people having a family history of the above mentioned clinical conditions. This would help in preventing and thus minimizing the occurrence of various health hazards caused due to their extensive usage thereby, improving the quality of life of the people.