

The Original German document from the HESE Project is available here:

www.hese-project.org/de/emf/WissenschaftForschung/showDocList.php?lang=en

Original title:

Strahlende Aussichten Beobachtungen zur umweltmedizinischen Bedeutung des Mobilfunks am Beispiel des chronischen Tinnitus

TRANSLATION

Radiating Prospects

Observations on the impact of mobile telecommunications on chronic tinnitus from the point of view of environmental medicine

Authors: Wilhelm HJ., Brachmann HM., Ogurlu T.

Address: HNO Gemeinschaftspraxis und Kopfklinik Frankfurt,
D 60594 Frankfurt am Rhein, Dreieichstrasses 59, Germany.

From a lecture given on 12.10.2002 at the 12th annual meeting of the Section "Allergy and Environmental Medicine of the German Society for Ear, Nose and Throat Medicine " [Sektion: „Allergologie und Umweltmedizin der Deutschen Gesellschaft für Hals-, Nasen-, Ohrenheilkunde“]

Univ.-Klinik Mannheim (Dir.: Univ.-Prof. Dr. K. Hörmann)

Introduction

There are ever increasing strong indications derived from scientific studies that pulsed high frequency electromagnetic fields as used for mobile telecommunications in the 900 MHz and 1800 MHz (GSM) networks as well as for DECT cordless telephones, damage the nervous and endocrine systems in humans and promote genetic damage and cancer. Furthermore, there are reports of behavioural changes, increased microperfusion, changes in EEG as well as the onset of seizures in the previously damaged CNS.

Fittingly, the Health Report of the Social Ministry published in January 2002 shows, that since 1993 the number of epilepsy cases in the German Federal State of Hessen has increased by half and the number of psychiatric referrals by 30%.

Similar observations have been made in the ENT area. We have recorded a clear increase in diagnoses of chronic tinnitus in recent years. According to records of the German Tinnitus Association for 1998, about 3 million adults are suffering from chronic ear noises. Goebel states in a report in 2002 that about 10 million Germans will become newly affected by ear noises, of which 340,000 people will develop a

chronic form requiring therapeutic treatment. 37% of these patients feel that their quality of life is affected.

Other known effects of high frequency pulsed electromagnetic radiation are the inhibition of the melatonin synthesis and the cessation of the [normal] circadian rhythm, possibly followed by the onset of depression and an impact on lymphocyte proliferation as a result. Also, there are structural changes in the saliva, the opening of the blood brain barrier as well as the weakening of the immune function.

Question

Since increasingly younger patients complain of ear noises which cannot be attributed to noise trauma, we must speculate about a new source of interference, which has arisen in recent years. Patients complain in particular about a strong warming of the ear region, neck stiffness and worsening ear noise after using a mobile phone or DECT telephone for a two minute phone call. This led some patients to initiate a questionnaire campaign with the aim of ascertaining whether mobile phones, cordless telephones or mobile phone base stations could possibly play a role.

Patients Group

Using 175 patients with chronic tinnitus that required treatment (>3 months, previous treatment), half were men and half were women, we investigated the possibility that mobile phones might influence chronic ear noise. Patients with an otogenic cause of chronic tinnitus were excluded from the study.

Laterality (N=175): 42% of patients had previously complained about chronic bilateral tinnitus, 31% on the right side and 27% on the left side.

Around 10% of these patients live near to a mobile phone base station or a high voltage electricity installation. 23% were unaware of the existence of any such installations in their residential area and 68% stated that such installations possibly did not exist.

Symptoms

When making a telephone call with a mobile phone or a DECT, 46% complained about a worsening of the ear noises independent of which ear had the tinnitus and which ear was used for making the telephone call. 54% noticed in addition a thermal effect, e.g. a warming of the ear, slight neck stiffness but no changes in the Tinnitus.

Recommendations for Therapy: The patients were then advised to refrain from using mobile phones or DECT telephones for about one week and to not take any tinnitus medication during this time. 80 patients carried this out voluntarily.

Results

At a subsequent follow-up, it became apparent that, for 66 % of these 80 patients, the tinnitus was subjectively improved without any further therapy and it was hardly noticeable anymore.

Summary

We assume that there is a medical correlation: that pulsed high frequency electromagnetic fields as they are used for mobile telephony, can either cause chronic tinnitus or worsen it and thereby represent a negative effect on the quality of life. In order to prove this phenomenon scientifically, further controlled clinical studies are required.

The large number of newly developed illnesses and ear noises that become chronic every year represent an economic factor to the health service that must not be underestimated.

One should also not forget that, amongst the approx. 8 Million hard of hearing in the Federal Republic of Germany, many wear hearing aids. Near base stations, they are prone to suffer from considerable feedback and noise in their hearing aid, which can cause stress in the individual.

For the author.

Prof. Dr. H.-J. Wilhelm, Kopfklinik Frankfurt L&W ZPL GmbH, Dreieichstr. 59, D 60594 Frankfurt/Main, Germany