NETWORK OF MOBILE TELEPHONE COMMUNICATION: NECESSARITY OF 3rd MILLENNIUM

V. Dejana¹, M. Dragan. ², V. Nebojsa³, S. Simo ³

Institute for occupational and radiological health, Deligradska 29, Belgrade Yugoslavia
Faculty for physical chemistry Studentski trg 12, Belgrade Yugoslavia
High school for applied science, str. Voje Ljesnjaka, Bijelo Polje, Montenegro
National Park Durmitor, Zabljak, Montenegro

INTRODUCTION.

Mobile telephones have transformed the telecommunications industry. These devices can be used to make telephone calls from almost anywhere. There are two types -

- ① one has the antenna mounted on the handset and
- ① The other has the antenna mounted on a separate transmitter or, if the telephone is installed in a vehicle, mounted on the roof or rear window.

Communication between a mobile telephone and the nearest base station is achieved by the microwave emissions from the antenna.

Concerns have been raised about the type of mobile telephone that has the antenna in the handset. In this case, the antenna is very close to the user's head during normal use of the telephone and there is concern about the level of microwave emissions to which the brain is being exposed. Those telephones that have the antenna mounted elsewhere are of no concern, since exposure levels decrease rapidly with increasing distance from the antenna. Cordless telephones, which need to be operated within about 20 metres of a base unit that is connected directly to the telephone system, do not have any health concerns associated with their use because exposure levels are very low.

Fig1 Fig2



Reports have appeared in the media linking the use of mobile telephones with, among other things, headaches, hot spots in the brain and brain cancer.

Media reports have claimed that up to 70 percent of the microwave emissions from hand-held mobile telephones may be absorbed in the user's head. This is not supported by the evidence, but nevertheless leads to speculation that hot spots may be created in the user's brain, thereby raising concerns that the telephones may be a health risk. Other reports have indicated that mobile telephone users suffer localized headaches when they use their telephone. At this stage, it is difficult to evaluate the evidence supporting these reports, since they have not been published.

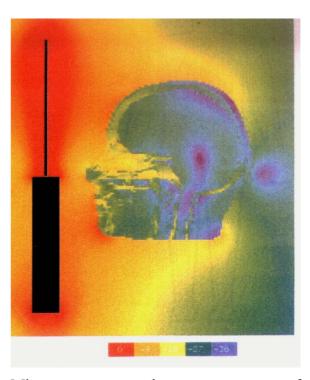
The brain cancer reports originated in the USA where a number of lawsuits have been lodged against mobile telephone manufacturers and suppliers. These claims for damages allege that the microwave emissions from mobile telephones used by the claimants caused their (in some cases, fatal) brain cancers. Those few cases that have been tried have been dismissed for lack of supporting evidence.

MATERIAL, METHODS AND RESULTS, as facts

Some public concern about mobile telephones is erroneously based on media attention to the possibility of adverse effects from exposure to power-line electromagnetic fields, which have a much lower frequency than the microwaves emitted by mobile telephones. The

physical properties and biological effects of these fields are very different from microwaves and it is meaningless to extrapolate the results of those studies to the subject of this Information Bulletin.

Fig 3



Microwaves but of are one type electromagnetic field. (For the purposes of this Information Bulletin, "fields" "radiation" are equivalent.) One of the ways that these fields are described is by specifying their frequency. The range of frequencies that useful for is telecommunications include microwaves.

The current Australian exposure Standard [7] is based on the well-established thermal effects of exposure to microwaves. That is, when tissue is exposed to sufficiently high levels of microwaves, the tissue is heated and damage may occur. The exposure limits are set well below levels where any significant heating occurs. The Standard also sets limits for pulsed radiation that are intended to eliminate possible effects where heating is not evident (non-thermal effects). All mobile telephones marketed in Australia must satisfy the regulatory requirements of Austel (the Australian Telecommunications Authority), as well as that part of

the Australian Standard that sets limits on the power output of a mobile telephone. Therefore, use of a mobile telephone is not expected to cause significant heating in any part of the body, including the brain.

Australia is good example of thermal heating concerning on climate changes and increasing a temperature due to ozone hole and natural phone from Pacific Ocean, the largest system included in natural phones of Earth.

Some research has indicated that non-thermal effects resulting from low-level microwave exposure also occur.

However, the existence of these effects has not been sufficiently established to allow for them in the Standard.

That research is highly dependable from neurone science, and brain metabolism research. As we can just put different sondas in ours head without consequence, mathematical model of all activity is solutions? As I am informed that research isn't far way from, hardly to admit but nothing or on beginning, on replay.

A few animal studies suggest that exposure to weak microwave fields can accelerate the development of cancer. Further studies are required to establish their reproducibility and the existence or otherwise of a dose-response relationship. Whether these results are relevant to users of mobile telephones is not clear. In any event, these results cannot be dismissed at this stage. The very few studies that have been conducted on human populations (epidemiological studies) do not provide any direct information on possible mobile telephone hazards and hence are of limited value. The results of these studies are difficult to interpret because exposure levels were either not measured or impossible to determine from the data provided. In general, however, this type of study will be useful in identifying possible links between mobile telephone use and cancer risk.

As Cancer program research as a new approach treat them as epidemiological studies, which could has same percentage of appearance from both environment (different chemicals) and as from genetic reasons. There are other epidemiological studies about STD (sexual transmitted diseases) and viruses infections as AIDS, Hepatitis, different influenza with consequence of meningitis it is hard to me to believed that my very useful old type *ALCATEL* (in usage from August 2000 and without evidence about damage brain tissue and functions), mobile phone can cause cancer in my brain. As it is not funny situations mine low standard level, on Balkan on mine lucky allowed to me to have them.

Complementary cellular and animal research is required to establish any cause-and-effect relationship and the biological mechanisms involved.

On the specific issue of brain cancer occurring in users of these telephones, it is important to note that such cancers existed before the introduction of mobile telephones. It is not simply possible to identify the cause of any single case of cancer. Long-term studies to investigate whether mobile telephone users have a greater incidence of, say, brain cancer than the general population have not been completed.

CONCLUSION

There is no evidence that microwave exposure from mobile telephones causes cancer, and inconclusive evidence that such exposure accelerates the growth of an already-existing cancer. More research on this issue needs to be carried out. Users concerned about the possibility of health effects can minimise their exposure to the microwave emissions by: limiting the duration of mobile telephone calls, using a mobile telephone which does not have the antenna in the handset or using a 'hands-free' attachment. There is no clear evidence in the existing scientific literature that the use of digital or analogue mobile telephones poses a long-term public health hazard (although the possibility of a small risk cannot be ruled out).

As the era of micro organism ant their adaptability on all human mistakes, wrong concept of industry, wrong knowledge of climate of their own planet further research on topic INDUCED BRAIN ABNORMALITY BY FREQUENCY OF MOBILE PHONE, should take account presence pathogens in human tissues and how the electromagnetic field influenced of their decreasing/and or increasing of growth.

REFERENCES

- 1. Vukovic Dejana, Markovic D. November 1999, Tara, Yugoslavia, XX Congress for radiation protection, pp 453-455
- 2. Mobile Telecommunications ISSUE 5
- 3. .Kusten n.Q. et all. Progress in Safety Assessments of Mobile Communications
- 4. Vukovic Nebojsa, Globally, regional mobile telecommunications of north Of Montenegro (un published data)
- 5. Pajevic Tomo, Stanic Simo, Regional mobile telecommunications region of National Park Durmitor (un published data)
- 6. www.promonte.com and www.monet.cg.yu
- 7. April 23, 2002 URL: http://www.arpansa.gov.au/is_phone.htm Freecall 1800 022 333