

# **BIBLIOMETRICAL ANALYSIS OF NEUROPHYSIOLOGICAL INVESTIGATIONS OF ACTION OF MICROWAVE RADIATION IN THE SECOND HALF OF THE XX CENTURY**

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Biological effects of non-ionizing radiation (NIR) of different kinds interested humanity for many centuries [5]. The nervous system is of great significance in reactions of organism to NIR [1-3, 6, 7]. Our pioneering investigations revealed predominant role of direct action of non-ionizing radiation of different kinds on brain structures [1].

Bibliometrical investigation of published material on neurophysiological aspects of action of MIR was not carried out up to now. That is why, we began bibliometrical analysis on this problem [4, 5].

The present work is devoted just to bibliometrical examination of such published works, specifically on action of microwave radiation upon neurophysiological objects of different kinds.

## **MATERIALS AND METHODS**

Information accumulated in world on neurophysiological effects of microwave radiation during 35-year period in the later half of the XX-th century (1966-2000) was considered. The state of investigations of this trend was analyzed on the base of the database "Medline" accessible through Internet. Bibliometrical data concerned investigations performed in neurophysiological objects (the brain, the cortex, neurons, nerves) with application of microwave radiation.

## **RESULTS AND DISCUSSION**

During 35-year period the general numbers of published works on biological effects of microwave radiation reached great value - 6920. From them 1435 works were carried out in different neurophysiological objects. They included 899 researches of action of microwaves on the brain, 325 - on the cortex, 165 - on neurons, 146 - on nerves, that corresponded 62.65%, 15.68%, 11.49% and 10.17% from general totality.

Dynamics of the numbers of considered published works was studied. Design of this dynamics had parabolic character.

Positive correlation between the numbers of papers made in different neurophysiological objects with application microwave radiation was found ( $r=0.62-0.84$ ;  $p<0.01$ ).

The prevalence of researches in the brain is result of increased interest of specialists in sphere of medicine and ecology to action of NIR. However exactly study on neuronal level is necessary for understanding of origin of reaction of organism on microwave [2, 3, 6, 7]. Undoubtedly neurophysiological investigation of action of microwave will hold a leading position at in future.

## CONCLUSION

Results of bibliometrical investigations of neurophysiological published works on action of microwave radiation are presented. The special features of quantitative characteristics of works, carried out in different neurophysiological objects (the brain, the cortex, neurons, nerves) are described. Analysis of neurophysiological effects of microwave radiation will have further development in XXI century [5].

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