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ANDROLOGY

Cell phones give more benefits than risks, but...

Marcin Słojewski

Department of Urology and Urological Oncology, Pomeranian Medical University, Szczecin, Poland

I don't even own a cell phone
– Jack Nicholson

On April 3, 1973, the first cellular phone call was placed by a general manager at Motorola [1]. It is an obvious fact that cell phones are the inherent element of modern life, not only in developed countries in which the number of phones used have a long time ago surpassed one per capita. With six billion active cell phones worldwide, around 75% of the world has access to this technology. Despite its popularity, many questions have been raised concerning its impact on general aspects of health and cancer development, among others. It is proven that cellular phones produce radiofrequency (RF) energy, which acts on biological materials by direct thermal or indirect, non–thermal effects. Although hundreds of studies have been conducted to answer the question whether cell phones pose a health hazard, there is still no direct and clear answer [2]. While some researchers have reported biological changes associated with RF energy, these studies have failed to be replicated [3]. The majority of studies published have failed to show an association between exposure to RF energy from a cell phone and health problems, except in regards to semen quality [4–6]. I read with great interest the paper of Badereddin and co–workers [7] concerning the potential adverse effects of cell phone technology on male erectile function. Although the authors confess that the value of this study may be impaired with the small number of recruited men (n = 20), they still deserve to be congratulated on the interesting idea and well–designed protocol. The authors have addressed their pilot study to the possible link between cell phone usage and erectile dysfunction. Two demographically similar groups of men suffering from erectile dysfunction diagnosed using the International Index of Erectile Function (IIEF) were compared in terms of total talking and carrying time. The results showed that the total time of exposure to the RF emitter is much more important than the duration of calls. It seems to be a reasonable conclusion even if the authors did not report where the phone was held by the users, since most of the time the switched on cell phone is been carried in the pockets. In this way it is located very close to the „effective organ". Even if it emits some harmful energy that can be absorbed by tissues, undoubtedly the final effects depend on the location of phone's antenna, the extent and the type of use and, finally, on the technology of the phone. Another factor, which was not taken into the consideration by the authors, is the distance of the users from other cell phone users, as it is one of the parameters evaluated in similar studies concerning this topic [8]. We have to remember that erection is a complex process of neurovascular physiological reactions, which are interfered by neural, vascular, hormonal, and psychological factors, as well as the integrity of the vascular bed of the penis [9]. It means that it may be also violated by some external, environmental factors, and among them radiofrequency emitters should not be excluded. The authors found that differences between two small studied groups were at the level of significance, so they carefully concluded that there might be some relation between cell phone usage and the inability to achieve and maintain satisfactory penile erection. This conclusion sounds too profound and does not derive directly from the results obtained in the study. But this study definitely poses more questions than it answers several others. A few years ago, one of the American urologists advised me: "If you do more than one hundred radical prostatectomies a year you should buy another cell phone". I would rather believe Jack Nicholson and at least stay with my only one phone, carry it far away from the crotch, and use hands–free sets wherever possible – just in case.

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Correspondence
Dr. hab. Marcin Słojewski
mslojewski@gmail.com