

Editorial comment to: Krajewski W, Dzięgała M, Kołodziej A, Dembowski J, Zdrojowy R. Vitamin D and urological cancers. Cent European J Urol. 2016; 69: 139-147.

## Vitamin D: a ‘wanted’ supernatural power or a power of wishful thinking

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The current issue of CEJU brings a somewhat ambiguous paper entitled “Vitamin D and urological cancers” describing (possible) role of the vit. D in the etiology of urological cancers [1]. Indeed, last years brought numerous publications presenting that 1,25-dihydroxyvitamin D<sub>3</sub> may alter human susceptibility to different diseases (even improve fitness) and its capability to cure or, at least, to soothe some human cancers [2, 3, 4]. Such contribution of the vit. D has been debated widely elsewhere, became trendy in contemporary medicine and engaged a great number of researches. Vit D and polymorphism of its targeted receptors have been harnessed to the etiology of: hypertension, bronchial asthma, type 2 diabetes mellitus, autoimmune disorders, cognitive decline and so forth [5]. Some studies suggest that vit. D receptor polymorphism may play a role in the prostate cancer, bladder cancer and other malicious tumours [6, 7]. Its role in the progress of the colon cancer has been scientifically proven [6]. The evidence for a protective effect of vitamin D on the risk of breast cancer has been published before. Thus, it looked that medicine found a gorgeous but simple and attainable remedy for almost everything.

Paper under discussion keeps pace with that papers and I am convinced that is worthy of notice as a well-tailored analysis adding a new twist to that issue [1].

Although considerable progress has been made toward understanding tumours etiology and the role of vit. D in human pathology, its role in cancer is still unclear [8, 9], Some papers present conflicting data clearly demonstrated in the manuscript under debate. Authors performed a survey of eligible studies

on above mentioned possible association [1]. Its real scientific merit consist in concentration of a large group of data – it is an undisputed value of that paper. Apparently, pinning high hopes on the vit D is a risky business. A consultative committee – US Preventive Services Task Force concluded that all these data are insufficient [10]. Probably other factors that contribute to overall good health status, like healthy lifestyle with befitting physical activity, keeping healthy and balanced diet may intermingle with vit D level. In the light of that it is possible that some trials confused causes and effects. Well, a distinction should be made between the primary and secondary outcome but we do not confidently know which came first: the chicken or the egg? Moreover, next trials questioned the validity of before published research.

A large volume meta-analysis (290 prospective observational studies and 172 random trials) indeed confirmed inversely proportional interrelation of the level of vit. D and incidence of cardiovascular, metabolic, inflammatory, neurologic and psychiatric disorders (even Alzheimer disease) but could not indicate the primary cause and secondary effect. Also, another authors found that vit. D supplementation had at most insignificant therapeutic effect on the above conditions [11].

It is apparent that the existing evidence to guide us on the subject of the vit. D supplementation is vague and volatile and is based on conflicting data. Nevertheless, there is one certain axiom that have emerged from above citations: complying with balanced, sagacious and healthy life style undoubtedly helps to keep vit. D and the risk of numerous diseases on a safe level.

## References

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