POTENTIAL CONTRIBUTION OF VITAMIN D IN CANCER

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Introduction.

After review and analysis of multiple publications and several studies, we have observed that the majority of studies found a protective relationship between sufficient vitamin D (VD) status and lower risk of cancer.

The evidence, suggest that the improvement of VD status, obtained by relevant VD supplementation, could reduce cancer incidence and mortality at low cost, with few or no adverse effects.

Materials and methods.

VD deficiency is recently recognized association with risk of several types of cancer [1,2].

As it has been reported in several recent studies that VD deficiencies have a higher risk of mortality in Sars-Cov-2 virus/ Covid-19 disease it is combined with the discovery of increased risks of cancer in those who are deficient. That suggest that VD deficiency may account for several premature death from colon [3], breast [4,5], ovarian [6], and prostate [7] cancer annually.

Results.

Anticancer effects of VD may derive from an immune effect, particularly in some cases, from managing growth and differentiation.

By epidemiological evidence, several observational studies have reported that VD has a beneficial effect on risk of colon, breast, prostate and ovarian cancer.

Several epidemiological studies reported higher risk of colon cancer in individuals who consumed lower amounts of VD. VD and its metabolites reduce the incidence of many types of cancer by inhibiting tumour angiogenesis [8,9] stimulating mutual adherences of cells [10] and enhancing inter cellular communication through gap junctions [11] thereby strengthening the inhibition of proliferation that results from tight physical contact with adjacent cells with a tissue. High serum level of VD are associated with markedly decreased proliferation of noncancerous but high-risk epithelial cells in the colon [12].

Potential toxic effects of VD overdosage, such as bone demineralization, hypercalcemia or nephrocalcinosis with renal failure are encountered rarely and could be avoided by good medical management, taking in account biological follow-up (serum levels of 25(OH)D).

High oral intakes of VD are not a concern from a cardiovascular viewpoint, because most studies suggest that the higher levels of 25(OH)D are associated with reduced cardiovascular risk.

Conclusion.

These reports allow a better knowledge of the role of VD in cancer prevention and management.

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