Would carcinogenesis have a synergistic relationship with bacteria and virus?

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According to data from the World Health Organization (WHO)(3), updated in September 2018, cancer is the second leading cause of death worldwide, totaling 9.6 million. The same survey mentions that, globally, one in six deaths is due to cancer and 70% of them occur in low- and middle-income countries. Another significant finding is that 22% of these deaths in these countries are associated with infectious conditions(2).

The WHO, in 2017, approved a resolution in the UN General Assembly containing actions(3, 4) for cancer prevention and control, in which, in partnership with the International Agency for Research on Cancer (IARC), recommends the need for research on the causes of the disease and the mechanisms of carcinogenesis, that is, it highlights the significant importance of the studies related to the attempt to clarify its causal processes.

It is known that cancer is a pathology in which normal cells become abnormal, with high rate of multiplication, invading other areas and organs of the body, circumventing all the processes of control of multiplication and destruction of cells, especially the immunological ones, so very similar to bacterial and viral infectious processes, as shown in the literature(5-10).

Considering, therefore, the importance of cancer as the second leading cause of mortality worldwide, as well as the imperious need for further studies and the fact that its pathophysiology in several immunological aspects present similarity with the survival of bacteria and viruses in our body. In this issue, the Jornal Brasileiro de Patologia e Medicina Laboratorial (JBPML) publishes an excellent article by Pêgas (2018)(11), in which the author points out several similar mechanisms of survival between neoplastic cells, bacteria and viruses, in which they circumvent the immune system, even proposing a different perspective at some forms of cancer, in whose etiopathogenesis may present a possible synergy with these microorganisms.

Enjoy reading.

REFERENCES