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Ethanol, flavonoid and prevention



Dear Editor,

I have read the excellent paper by Ghanemi.¹

The Author affirms that natural active compounds such as flavonoids can be very helpful and have been described by some others as natural medicine which is preventive rather than curative.¹

There is a problem when flavonoid or others beneficial substances are in beverages as wine.

In fact, for the presence of flavonoid, moderate wine intake is considered useful for cardio-vascular (CV) prevention.² This is a partial and dangerous scientific information.

In fact, in a glass of wine (125 ml, 12°) 12 g of ethanol are present.³

It is well known that ethanol is toxic. Therefore, ethanol in wine is a toxic molecule.

It is also known that doses of below 2 drinks (< 20–24 g of ethanol)/day increase the risk of mortality and 1–2 drinks/day increase the risk of atrial fibrillation, hypertension^{4,5} and dilated cardiomyopathy.⁶

In addition, the World Health Organization (WHO) has included alcoholic beverages, ethanol and acetaldehyde in Group 1 IARC (International Agency for Research on Cancer – WHO) and it is now known that there is no safe threshold level.⁷ In Group 1 IARC there are substances that have a causal relationship with human cancer.

Approximately 10 g/day of ethanol increases the risk of cancers of the oral cavity, pharynx, larynx, esophagus and breast.^{5,8}

Moreover, Whitman et al.⁴ recently showed that “individuals who recognize that moderate consumption has a protective effect consume on average 50% more than those who do not recognize this property of alcohol”.

For this reason it is appropriate to be prudent and to provide the correct information without satisfying the patients’ desire to maintain the pleasure of moderate consumption. The choice to consume alcohol must be made freely, but with an awareness of the risks involved. In addition, the health report on alcohol and health should have a clear and unambiguous position: ethanol is toxic and carcinogenic.⁹

Moreover, Lachenmeier et al.¹⁰ have demonstrated that alcoholic beverages are multicomponent mixtures containing several carcinogenic compounds. These are known and suspected human carcinogens: ethanol, acetaldehyde, acrylamide, aflatoxins, arsenic, benzene, cadmium, ethyl carbamate, formaldehyde, furan, lead, 4-methylimidazole, N-nitrosodimethylamine, ochratoxin A and safrole.

Thus, the alcohol production lobby should not be given the opportunity to associate alcohol with health. It is unethical to associate a carcinogen with health.

Moreover, it should be noted that the current data on alcohol and CV diseases is only correlative, whereas the toxic and carcinogenic effects of ethanol and acetaldehyde have been widely demonstrated and experimentally reproduced.^{11,12}

Ethanol is not a nutrient, but a substance of nutritional interest as it provides 7 kilocalories per gram. The low risk ethanol dosage is 10 g/day for women and 20 g/day for men.¹³

The only tentative information that we can honestly give our patients is that a cost-benefit assessment has indicated that there are no safe thresholds with regard to the relationship between alcohol and cancer.

We are, therefore, in agreement with the European Code against Cancer, which states: “if you drink alcohol of any type, limit your intake. Not drinking alcohol is better for cancer prevention”.¹⁴

According to Ghanemi¹ active elements found within food or beverages may be toxic even taken at a small dosage: therefore, CV disease prevention cannot justify the use of alcoholic beverages.

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