عنوان مقاله:

p۵۳ Mutation Possibility and Food Dietary Containing Heavy Metals

محل انتشار:

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خلاصه مقاله:

Background: Several types of cancer have mutations in the tumor suppressor gene p۵۳. Environmental mutagens such as heavy metals play an undeniable role in p۵۳ mutations and leave the mutational fingerprint on the TP۵۳ gene. Therefore, the study of p۵۳ mutation spectra can reflect the past heavy metals exposure.Results: The current study was found interesting results by reviewing the previous data published in the databases. These results were obtained by comparing the common mutational profile between Iran, India, and Pakistan, and the association of these mutations with metals. The mutations in codons ۱۴۶ (TGG→ TGA, Trp→ Stop), ۲۱۴ (CAT→CGT, His→ Arg), and ۲۴۹ (AGG→AGT, Arg→ Ser) were common in both India and Iran, due to the contamination by zinc and arsenic; arsenic and copper; cadmium, arsenic, nickel, and copper poisoning, respectively. Moreover, the mutations in codons ۲۴۸ (CGG→ CAG, Arg→ Gln), ۲۲۰ (TAT→ TGT, Tyr→ Cys), ۲۴۸ (CGG→ TGG, Arg→ Trr), and ۲۷۳ (CGT→ CAT, Arg→ His) were common among these three countries that could be related to poisoning with arsenic and zinc; arsenic; copper and arsenic; zinc and arsenic, respectively. These results can give a possible explanation for the cause of mutational similarities in these three areas, which can help identify the cause of high rates of p۵۳ mutation and cancer control in these areas.Conclusion: However, concerning the effects of other environmental factors, we definitely cannot explain the .cause of these mutations among the heavy metals mentioned, since it requires more detailed studies

کلمات کلیدی:

cancer, Mutation, p۵۳, Heavy metal