

5-FU may cause cardiovascular side-effects

5-Fluorouracil (5-FU) is an anti-metabolite from fluoropyrimidines group, used to treat different types of cancers including colon, rectum, head and neck, and other cancers [1]. 5-Fluorouracil (5-FU) may cause frequent side effects like myelosuppression, mucositis, nausea, emesis and hand-foot-syndrome, but is also associated with toxic cardiac reactions [2].

Cardiotoxicity is a rare, but serious side effect of fluoropyrimidines. It is considered a wide spectrum of side effects, from electrocardiogram changes (69% of cardiac events) to myocardial infarction (22%) and cardiogenic shock (1%) [3].

Felix Steger and their colleagues in (2012), Germany have reported different case series, "three patients with cardiotoxic events during chemoradiotherapy including 5-FU. Two of the patients could not be treated with 5-FU anymore because they had developed a myocardial ischemia, which was most likely caused by fluorouracil. Another patient, who complained about typical angina pectoris during 5-FU-infusion and had a new left anterior hemiblock, was reexposed with prophylactic administration of nitrendipine." [3].

Michael F. Sorrentino, and Alexander G. True dell have demonstrated in a case report that clinicians should be aware of the various serious, adverse cardiac effects from 5-FU. Cardiovascular risk factors and prior history of cardiac disease should be investigated and patients counseled appropriately. Outpatients should be advised to seek medical attention without delay in the event of symptoms. Inpatients should be observed closely and 5-FU administration discontinued if cardiac symptoms develop. [4]

In conclusion, 5-FU is a chemotherapeutic agent that may cause many common adverse side-effects and rare but serious side-effects like cardiovascular toxicity may happen. Medical attention is needed while administrating 5-FU. If cardiovascular side-effects happened 5-FU should be discontinued with close monitoring for the cases.

References :

- (1) cancer organization , accessed in 24/3/2014,
<http://www.cancer.org/treatment/treatmentsandsideeffects/guidetocancerdrugs/fluorouracil>
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http://www.uptodate.com/contents/fluorouracil-systemic-drug-information?source=search_result&search=5-fluorouracil&selectedTitle=1~148#F8100811
- (3) Felix Steger, Matthias G Hautmann, and Oliver Kölbl , 5-FU- induced cardiac toxicity – an underestimated problem in radioincology ?,*Biomedical center*,2012,**7**:212
- (4) Michael F. Sorrentino, and Alexander G. True dell, 5-Fluorouracil-induced coronary thrombosis: A case report and review of the literature , *Journal of Cardiology cases* ,2012,**6**;e20-e22.

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