

HEMOSTATICS IRRADIATION AND CORRELATION WITH VON WILLEBRAND FACTOR PLASMA IN CANCER BLEEDING CESSATION

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Background: Radiation is one of the modality for bleeding cessation to treat cancer bleeding. Von Willebrand factor (vWF) plasma is already known as initiator of the platelets adhesion in haemostatics. Publication of references in haemostatics irradiation is still infrequent. This study is to investigate the changes of clinical response based on WHO bleeding scale before and after irradiation, also to examine the difference level of vWF plasma before and after irradiation, and to search correlation between bleeding grade response to vWF plasma level before and after haemostatics irradiation.

Methods: This study is pre-post study design without control held in Department of Radiotherapy, Cipto Mangunkusumo National General Hospital, Jakarta. Subjects are cancer bleeding patients who received haemostatics irradiation according to inclusion criteria. Blood samples for vWF examination and clinical scoring for WHO bleeding scale data are taken before and after irradiation.

Result: Overall 23 subjects, including 2 patients died because of the bleeding. The effectiveness of haemostatics irradiation is 91.3%. Haemostatics irradiation significantly decreased clinical bleeding grade using WHO bleeding scale, from median 3 to median 1, $p < 0.001$. The haemostatics irradiation significantly elevated the level of vWF plasma, mean differences 12.38 IU/dL (SD 12.75 IU/dL), $p = 0.001$. There is also significant correlation between the decrement of clinical bleeding grade and the elevation level of vWF plasma, $p = 0.019$ ($R = -0.533$).

Conclusion: Haemostatics irradiation is effective for bleeding cessation and as chosen modality in treating cancer bleeding. Haemostatic irradiation is clinically able to degrade the bleeding grade using WHO bleeding scale, and also elevate the level of vWF plasma. Haemostatics irradiation is also significant correlation between elevation of vWF plasma and decrement of clinical bleeding grade using WHO bleeding scale.

Biography

Umi Mangesti Tjiptoningsih, MD, has completed her education as Radiation Oncologist from Medical Faculty of University of Indonesia, 2014. She is now a Medical Staff of Radiotherapy Department at Dharmais Cancer Hospital of Indonesia.

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