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Anemia in cancer patients undergoing radiotherapy and chemotherapy in National Hospital Abuja, Nigeria

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Introduction: Many cancer patients present with anemia prior to radiotherapy and chemotherapy or may experience anemia/worsening of anemia at some point during treatment.

Aims & Objectives: The aim of the study was impact of anemia in cancer patients undergoing Radiotherapy and Chemotherapy.

Methodology: 201 cancer patients of both sexes with histopathologically confirmed malignancies (solid cancers). Patient's pre-treatment Hb was taken. Patients were distributed into Radiotherapy, Chemotherapy and Chemoradiation. Their Hb was measured once every 2 weeks. The blood film pictures of the patients were examined. The whole process was terminated after 3 consecutive Hb reading or after week 6. Anemia was classified into: Less than 10 g/dl (Severe anemia), 10-10.9 g/dl (moderate anemia), 11-12 g/dl (mild anemia) and 12 g/dl and above (no anemia).

Results & Analysis: Out of 201 cancer patients, 86.1% were female and 13.9% were male. Age range, 25-75 years, 100 patients were on Chemotherapy, 63 patients on Radiotherapy and 38 patients on Chemoradiation. The prevalence in anemia in cancer patients undergoing radiotherapy and chemotherapy was found to be 63% as shown by blood film picture (i.e., average of 72%, 42.9% and 73.7%). At the end of therapy, 62% (100) patients on Chemotherapy and 55.6% (63) patients on Radiotherapy had their Hb level between 11-12 g/dl, 39.5% (38) cancer patients on Chemoradiation arm had Hb value of 10-10.9 g/dl. At P-value>0.05, there was no statistical significance on distribution of mean Hb, standard deviation based on sex and treatment type.

Conclusion: Prevalence of anemia in the study group was found to be 63% while 37% had adequate hemoglobin (Hb) after the therapy as reflected in the blood film picture. At 95% confidence interval, Chemotherapy had greatest impact on Hb level during therapy. Thus Chemotherapy: 9.60-10.62 g/dl, Radiotherapy: 11.52-12.13 g/dl and Chemoradiation therapy: 10.98-11.36 g/dl.

Biography

Chinedu Simeon Aruah graduated in 2004 from University of Nigeria Nsukka (UNN) where he obtained MBBS Nigeria, and enrolled for residency training in Radiation Oncology at the National Hospital Abuja, Nigeria, qualified in 2014 and got inducted as a Fellow of West African College of Surgeons (FWACS) Radiation Oncology in March 2015. He won National Hospital Abuja Research Grant 2013 during his dissertation work. He has a Master's degree in Public Health (MPH) from University of Nigeria Nsukka (UNN). He founded an NGO Pathfinder Healthcare Foundation (PHF) to create cancer awareness among rural dwellers. He is currently working at the National Hospital Abuja, Nigeria as a Researcher and Consultant Radiation Oncologist with interest in Public Health.

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