



PACKED RED CELL TRANSFUSION AND SYMPTOMATIC BENEFITS TO CANCER PALLIATIVE PATIENTS

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ABSTRACT

Background- The global burden of cancer is on the rise in the middle and low economic countries accounting for 82% of total cancer population and 70% of cancer related deaths world wide

Methods- This was a hospital-based study. The study included a total of 100 cancer palliative patients both admitted to the hospital and attending palliative OPD. Information about the type of cancer, stage and site was not recorded. A written consent was obtained from all the patients for participation in the study. Patients with advanced cancer on diagnosis (Stage IIIb and IV), progressive and refractory or recurrent to chemotherapy and those who did not accept any form of active-cancer treatment either due to religious, social or economic reasons were included in the study.

Results- Prior to transfusion, 65.62% (42/64) patients had fatigue, but only 6.25% of them complained of fatigue posttransfusion. Likewise, improvement in breathlessness symptom was noted in 68.00% of patients post-transfusion. Symptom relief was found to be statistically significant in packed cell transfused patients ($p < 0.001$).

Conclusion- Anemia is present in a majority of cancer palliative patients. Symptomatic benefits to fatigue and breathlessness secondary to anemia can be achieved by packed red cell transfusion.

KEYWORDS : Packed cell, Cancer, transfusion

INTRODUCTION

The global burden of cancer is on the rise in the middle and low economic countries accounting for 82% of total cancer population and 70% of cancer related deaths world wide. The rise has been attributed to improved management of communicable diseases, thereby, leading to increasing aging population and incidence of non-communicable diseases. Besides this, rapid urbanization has further assisted in escalating prevalence of established risk factors like physical inactivity, obesity, pollution and changing reproductive patterns.¹

World Health Organization (WHO) defines Palliative care as "an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual". In spite of massive demands of palliation and hospices, palliative care physicians and centers are few and far between in our country.²

MATERIAL AND METHODS

This was a hospital-based study. The study included a total of 100 cancer palliative patients both admitted to the hospital and attending palliative OPD. Information about the type of cancer, stage and site was not recorded. A written consent was obtained from all the patients for participation in the study. Patients with advanced cancer on diagnosis (Stage IIIb and IV), progressive and refractory or recurrent to chemotherapy and those who did not accept any form of active-cancer treatment either due to religious, social or economic reasons were included in the study.

Patients receiving active cancer treatment; chemotherapy or radiotherapy and those with hematological malignancies were not included in the study. Patients with hematological malignancies both actively receiving chemotherapy and those in remission followed up with either oncologists or hematologists, so these groups of patients were not included in the present study. Also, patients who had have transfusions within the past 3 months and those who received ESA within

the past 2 months were also excluded from the study.

Table 1. Base line characteristic

Variable	Anemic (n=64)	Non anemic (n=36)
Mean age	56.23 ± 12.39 yrs	53.69 ± 11.36 yrs
Male : Female	26 : 38	16 : 20
Hb (gm/dl)	8.32 ± 1.31	11.23 ± 2.13
Fatigue	42/64	11/36
Breathlessness	40/64	4/36

Table 2. Comparison of fatigue and breathlessness symptoms among transfused patients

Variable	Anemic (n=64)		p-value
	Pre transfusion	Post transfusion	
Fatigue	42/64	4/64	0.01
Breathlessness	40/64	2/64	0.01

Prior to transfusion, 65.62% (42/64) patients had fatigue, but only 6.25% of them complained of fatigue posttransfusion. Likewise, improvement in breathlessness symptom was noted in 68.00% of patients post-transfusion. Symptom relief was found to be statistically significant in packed cell transfused patients ($p < 0.001$).

DISCUSSION

Anemia in palliative patients can be a result of global impact of cancer on bone marrow which can occur even before any anticancer treatment. Cytokines like TNF- α blunts erythropoietin effect and IL-1, IL-6 and interferon interfere with iron metabolism causing anemia. Chronic inflammation, malnutrition, bleeding, renal insufficiency, anemia of chronic disease and other co-morbidities have been attributed as a cause of anemia in cancer patients.

Anemia in cancer palliative patients in the present study was estimated at 36.00% similar to Ludwig H. et al.³ while others have reported prevalence as high as 65%.⁴ Maccio A. et al.⁵ reported a higher percentage of CIA in advanced cases and compromised performance status (PS) but the present study did not categorize the severity of cases and PS.

Blood transfusion is useful in the management of anemia in palliative patients, especially when anemia in cancer patients

decreases the functional status and QoL. The transfusion rate was 35.00% which was slightly higher than previous studies.^{4,5} Moreover, several studies have observed that palliative patients at the end of their life are more likely to receive additional transfusions than normal setting.⁵

CONCLUSION

Anemia is present in a majority of cancer palliative patients. Symptomatic benefits to fatigue and breathlessness secondary to anemia can be achieved by packed red cell transfusion; however transfusion should be customized to an individual patient by an experienced palliative care physician in accordance with patients' preferences.

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