ORIGINAL ARTICLE

Blood Transfusion in Geriatric Patient: Our Experience

Yogi Raj Joshi[1], Rajshree Behra[2]

Authors' affiliations: [1]Associate Professor, Dept. of Pathology; [2]Professor, Dept. of Immunohaematology & Transfusion Medicine, Dr. S.N. Medical College, Jodhpur
Correspondence: Dr Rajshree Behra, Email: drrajshreebehra@gmail.com, Mobile No.: 9828030210

ABSTRACT

Introduction: Anaemia is common in geriatric population and can have a significant morbidity and mortality. Geriatricians have to deal with large number of patients with significant anaemia. The object of this study to know the common cot cause of anaemia require blood transfusion in geriatric patient and to raise awareness regarding quality of life and anaemic disorder and treated earlier thus reducing transfusion and also preventing risk of transfusion.

Material and Method: The study was performed for the period of 2 years from January 2017 to January 2019 in patient admitted at M G Hospital Jodhpur. 1500 Geriatric patient included age ranges from 60 to 106 years.

Result: In this study the commonest causes is Nutritional anaemia in geriatric patient and least common cause is pulmonary tuberculosis.

Conclusion: Nutritional anaemia being most common cause reflects attention towards diet and nutrition of the geriatric population.

Key words: Blood, transfusion, geriatric

INTRODUCTION

Anemia is frequent in elderly patient (over 85 years) [1-3] & associated with increased morbidity [4]. Many underlying disorders, such as myelodysplastic syndrome (MDS), other blood cell disorders, cancer, chronic kidney disease (CKD), or certain gastrointestinal (GI) diseases develop more frequently at advance age. In many patients different etiologies may act together and there by contribute to the development of anaemia at older age[5-6].

Geriatricians have to deal with a large number of patients with significant anemia but an absence of well constructed guidelines for the frail and the very old. The anaemia in the geriatric group is multifactorial and also important in guiding the quality of life in future.

Anemia is also prognostic for diminished physical performance and loss of mobility in people of age 65 Yrs. & above.[7] The criteria for transfusion were hemoglobin level <8gm/dl & some geriatric issues such as malignancy, chronic kidney disease, Nutritional case etc. Nutritional deficiencies are very common which need to be identified and treated appropriately. Anemia in Orthopedics cases is also very common which may be due to fracture, trauma or surgery.

Myelodysplastic syndrome increases in frequency with age & may be difficult to diagnose & only a minority of cases respond to appropriate treatment. Anemia should be considered as a factor that reduces quality of life and a risk for early death.[8] The aim of anemia management should be to restore patient functionality and quality of life by restoring effective red cell volume. [9]

METHODS

The retrospective and prospective study was performed for a period of 2 yrs. (from January 2017 to January 2019) at M.G Hospital Jodhpur. 1500 geriatrics patients admitted in different wards in this hospital. All the patients who received packed red blood cells had Anemia (Hb<8 gm/dl) due to various causes. Data was collected retrospectively from the records of hospital.

The causes of Anemia who received blood where as follow: Nutritional Anemia, Malignancies, Orthopedics patients, Chronic Kidney diseases, Bleeding due to trauma, Pulmonary tuberculosis etc.

RESULT

During 2 yrs. study in our hospital, 1500 geriatric patients of age varies from 60-106yrs. received packed

red cell transfusion. The etiology of Anemia was multifactorial.

An appropriate cause responsible for Anemia was identified. The Nutritional Anemia in geriatric patients is the commonest in our study. Out of 491 patients (32.8%) 104 were males and 387 females who received packed cell transfusion. The next common cause was Malignancy. Out of 292(19.2%) cases 175 were males and 117 were females who received packed cells. In malignancy, hematological malignancy that too MDS was most common. Out of 285 (19.0%) cases 165 were males and 120 were female who were included under miscellaneous group. It included diseases like burn, accident poisoning MI calculus and unexplained anaemia.

Out of 262 (17.46%) Orthopedics cases 212 were males and 50 females. In Orthopedic cases wetre of fracture, trauma and surgery. Out of 80 (5.33%) cases of chronic kidney disease, 47 were male and 33 were female who were undergoing dialysis and receiving blood. The next causes in our study, Geriatric patient who received packed cell were 69(4.6%) cases of bleeding disorder of whom 48 were male and 21 were female. Bleeding disorder included platelet deficiency and coagulation factor deficiency or due to some unknown cause having bleeding. The least cases were of pulmonary tuberculosis i.e only 21 (1.4%) patients of which 12 were male and 09 were female.

Table 1: Reasons for blood transfusion in geriatric patients

Etiology	Male	Female	Total cases (%)
Nutritional Anemia	104	387	491 (32.8)
Malignancy	175	117	292 (19.4)
Miscellaneous (Burn, Accident, Poisoning, MI, Calculus Etc.)	165	120	285 (19.0)
Orthopedics (fracture, trauma or surgery)	212	50	262 (17.46)
Chronic Kidney Disease (CKD)	47	33	80 (5.33)
Bleeding Disorder	48	21	69 (4.6)
Pulmonary Tuberculosis	12	09	21 (1.4)

DISCUSSION

Anaemia is prognostic for diminished physical performance and loss of mobility in people of age 65 years and above. Anaemia is common concern in geriatric age; in this population it can have significantly severe complications.

On etiologic basis anaemia can be divided into Nutritional anaemia, bleeding disorders, anaemia of chronic infection, in chronic kidney disease (CKD) and clonal anaemia. In few cases no etiology is found. These patients may initially be diagnosed as unexplained anaemia (UA).[10] According to recent classification and through work up including Bone Marrow (BM) studies, these cases are diagnosed as idiopathic cytopenia of unknown significance (ICUS) with isolated anaemia (ICUS-A).[11-13] In some cytopenic patients, somatic mutation were detected in blood leucocytes, but diagnostic criteria for MDS or other BM neoplasms are not fulfilled , a condition termed Clornal cytopenia of undetermined significance (CCUS).[13-14]

In our study the most common cause was nutritional anaemia who received blood transfusion which might be due to poor quality of life, this shows appropriate attention should be paid towards diet and nutrition of geriatric population.

The next common cause was malignancy that too MDS cases. As we know malignancies increases in frequency with age, only minority of cases responded to treatment. Anaemia is associated with poor outcomes and symptomatic treatment with transfusion frequently has to be considered.

The least common cause in our study was pulmonary tuberculosis which might be due to less number of geriatric cases of this disease admitted in this hospital.

Very less studies on cause of anaemia requiring blood transfusion in Geriatric patient has been done, so it is not possible to compare with other study. Larger studies are required.

CONCLUSION

Nutritional anaemia being most common cause reflects attention towards diet and nutrition of the geriatric population.

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