

A Study of Papaya Extract in the treatment of Low Platelet Count

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Abstract: *Background: Hepatitis C, tuberculosis and human immunodeficiency virus also have been reported in the causes list. Thrombocytopenia is a well - known complication of chronic lymphocytic leukemia, all though it may not be encountered as easily as seen in auto - immune haemolytic anemias in these patients. It has also been reported in patients with other lympho - proliferative disorders including Hodgkins disease. Thrombocytopenia in patients with a variety of solid tumors has also been thought to most likely be immune mediated. Thrombocytopenia may accompany Graves' disease and Hashimotos thyroiditis, but it is not certain that it is immunologically mediated or not. Majority of the papaya plant parts is known to have antimicrobial property. This study puts in a sincere effort to check the effects of papaya extract in the treatment of low platelet count. This study is intended to help the practicing physicians to understand the benefits of the use of papaya extract when using in the cases of thrombocytopenia. Thirty patients who had thrombocytopenia were considered for the study. The study was conducted in the Department of Internal Medicine, Father Muller Medical College, Mangalore. The study was conducted from April 2013 to May 2015. Detailed history was taken. After taking aseptic precautions the blood sample was collected and sent for the central lab for platelet count. The initial count was noted as first reading. Then the patients were given 25 ml of C. Papaya extract three times a day in the morning, afternoon and in the evening. Subsequently the test was repeated on day two, day three, day four and day five of the treatment. The readings were noted. The final reading on the day five was taken and measured for significance.*

Keywords: Papaya Extract, Thrombocytopenia, Dengue, Malaria, Hemorrhage

1. Introduction

Hepatitis C, tuberculosis and human immunodeficiency virus also have been reported in the causes list. During the last several years, low platelet count was also reported in patients with H. Pylori particularly in Europe and Japan. Platelet counts may or may not normalize with treatment directed only for helicobacter pylori infections. The ASH guidelines recommend that H. Pylori infection be considered in all adults with low platelet count for whom eradication therapy would be undertaken if testing were positive. Thrombocytopenia is a well - known complication of chronic lymphocytic leukemia, all though it may not be encountered as easily as seen in auto - immune haemolytic anemias in these patients. It has also been reported in patients with other lympho - proliferative disorders including Hodgkins disease. Thrombocytopenia in patients with a variety of solid tumors has also been thought to most likely be immune mediated. Thrombocytopenia may accompany Graves' disease and Hashimotos thyroiditis, but it is not certain that it is immunologically mediated or not. Platelet associated IgG has been increased when studied, but there may also be an element of enhanced reticulo - endothelial phagocytosis.

Thrombocytopenia is the Dengue hemorrhagic fever. The disease is caused by Dengue viruses [1]. Dengue is found in tropical and sub-tropical regions around the world like and the fact that our country lies in the tropics means that the disease is rampant [2]. According to latest statistics it is estimated that there are between fifty and one hundred million cases of dengue fever and about 5,00,000 cases of dengue haemorrhagic fever each year which require hospitalization [3]. Dengue fever is spread through the bite of an infected *Aedes aegypti* mosquito [4]. With each infection the patient gets lifelong immunity to that particular serotype but subsequent infection with a different serotype is possible

[5]. Unfortunately, due to lack of adequate surveillance systems in the underdeveloped and developing countries, the exact extent of the problem are not known [6].

This study is intended to help the practicing physicians to understand the benefits of the use of papaya extract when using in the cases of thrombocytopenia.

2. Aims and Objectives

To study the effects of papaya extract in the treatment of low platelet count.

3. Methods

- Sixty patients who had thrombocytopenia were considered for the study. The study was conducted in the Department of Internal Medicine, Father Muller Medical College Medical Sciences, Mangalore
- The study was conducted from April 2016 To September 2016 .
- Then the patients were given 25 ml of C. Papaya extract three times a day in the morning, afternoon and in the evening. Subsequently the test was repeated on day two, day three, day four and day five of the treatment. The readings were noted. The final reading on the day five was taken and measured for significance.

Inclusion Criteria:

Patients who had confirmed thrombocytopenia were considered for the study.

Exclusion Criteria:

The patients who were known to have central bone marrow diseases were not considered for the study.

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All the statistics were done using the SPSS software 2015, California.

4. Results

Table 1: Different diseases that were causing thrombocytopenia

Disease Causing Thrombocytopenia	Thrombocytopenia	Percentage
Dengue	06	13.33%
Malaria	08	16.66%
Chemotherapy	16	53.33%

Table 2: Mean Platelet count in the beginning

Disease Causing Thrombocytopenia	Mean Platelet Count	Standard Deviation
Dengue	50300	10000
Malaria	82900	11500
Chemotherapy	49600	10200

Table 3: Test for Significance

Chemotherapy Initial Response	
Mean Platelet Count	49600
Second day platelet Count	53100
Significance (P < 0.05)	0.041

5. Discussion

After treatment only chemotherapy patients responded significantly on the first day although on the fifth day it lacked the same pace of prognosis. All other diseases after five days responded very well and crossed the one and half lakhs mark.

In the other study conducted by Nisar Ahmad⁷ they reported a rise in platelet count of 73000 on the first day, 120000 on the second day, 137000 on the third day, 159000 on the fourth day and 168000 on the fifth day. The clear cut disease was not considered for the study but in our study it was considered. The difference might be due to the fact that the population studied was different and the fact that we in our study prescribed to take the papaya extract three times a day was different from their study. In their study they prescribed to take the medicine only twice.

The exact mechanism of thrombocytopenia is not known. It might be caused by two mechanisms. Firstly it may be due to suppression of the production of the platelets and secondly due to peripheral destruction of the platelets.

6. Conclusion

The papaya extract acts as a miracle drug in the treatment of thrombocytopenia. Although exact mechanism of its action is still unknown but if right research is done it can be guaranteed as a potent drug of choice in the treatment for thrombocytopenia.

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