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A Case Report On Steroid Refractory Idiopathic Thrombocytopenic Purpura

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ABSTRACT:
Idiopathic thrombocytopenic purpura (ITP) is an autoimmune disorder in which the immune system attacks and destroy it's own platelet cells resulting in excessive bruising and bleeding. It is characterized by low platelet count, normal bone marrow and the absence of other causes of thrombocytopenia.ITP is most common in young women; 70 percent patients are women over 10 years of age and 70 percent among them are less than 40 years of age. Steroid refractory thrombocytopenic purpura is a case in which patients either never respond or initially respond and develop recurrence while continuing steroid treatment. The incidence of Idiopathic thrombocytopenic purpura (ITP) is 2.9/100000 person- years with age, seasonal, and regional variations; in adult, 18% were secondary. In case of the incidence of steroid refractory, incidence is much lower than ITP. A 47 year old male patient was in the hospital who came with the complaint of purpura in multiple areas of the body. He had seen the rash many times on his body but he ignored. An Ayuvedic doctor, whom he was under the treatment for back pain at that time took first notice at it ,as a result of which he was asked to be admitted in the hospital eventually diagnosing with Idiopathic thrombocytopenic purpura (ITP) His Peripheral smear showed severe thrombocytopenia at the time of admission. He was discharged as his platelet count showed a gradual increase and was found to be symptomatically better. He was admitted again in the next month with the same complaints and was diagnosed with Steroid refractory case.

Keywords: Idiopathic thrombocytopenic purpura (ITP), Steroid refractory.

I. INTRODUCTION:

Idiopathic thrombocytopenic purpura (ITP) is an idiopathic thrombocytopenia triggered by auto antibodies against platelet proteins [1]. Thrombocytopenia is a condition that can be passed down through generations or acquired. There are three types of thrombocytopenia: diminished production, increased destruction and sequestration [2]. Although the general risk of bleeding in ITP is minimal, patients with a low platelet count are at risk for severe and life-threatening bleeding. Individuals with a platelet count of less than 10,000/mm3 are at the greatest risk of bleeding [3]. The chronic condition is characterised by a length of 12 months or more from the diagnosis [4]. Persistent ITP is when it is present for duration of 3-12 months since the diagnosis. The prevalence of ITP outnumbers the incidence since it is typically a chronic illness in adults. Chronic refractory ITP is regarded as when any treatment fails to keep the platelet count over 20,000/mm3 for an extended period of time without causing unacceptable harm [5,6].Hence, a Steroid refractory case is when patients either never respond or initially respond and develop recurrence while continuing steroid treatment.

II. CASE PRESENTATION:

A 47 year old male patient was admitted on ninth October in the hospital who came with the complaint of purpura in multiple areas of the body. He had seen the rashes numerous times but he ignored and took it lightly. An Ayuvedic doctor, whom he was under the treatment for back pain at that time took first notice at it .As a result of which he was asked to be admitted in the hospital eventually diagnosing with Idiopathic thrombocytopenic purpura (ITP). His Peripheral smear showed severe thrombocytopenia at the time of admission. Platelet count was initially 12000/cumm. He was immediately started with dexamethasone 40mg OD.Fortunately, on the next day his platelet count was significantly increased to 20,000/cumm .He was discharged on eleventh October as his platelet count showed a gradual

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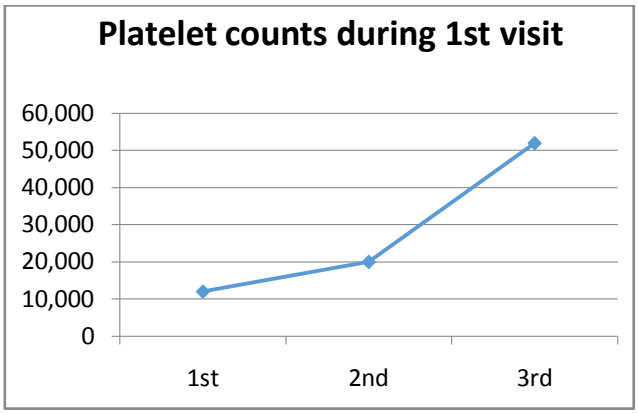
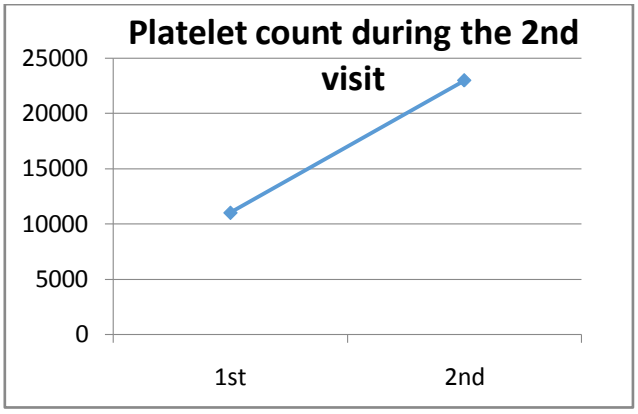
increase to 53,000/cumm and was found to be symptomatically better.

On November first, he was admitted again with the same complaints and was diagnosed with steroid refractory case. His Platelet count on the first day was 11,000.He was managed with Dapsone 100 mg which is the second line given for ITP and a combination of tranexamic acid 250mg and ethsylate 250mg.As there was an improvement in the platelet count to 23,000 seen ,he was discharged.





III. DISCUSSION:

ITP generally respond to corticosteroids or IVIG as a first-line therapy. When compared to IVIG, corticosteroids have the benefits of efficacy, convenience, and affordable cost. In non-life threatening ITP, corticosteroids are generally administered. IVIG, on the other hand, is highly beneficial in individuals who have severe bleeding or who do not respond to corticosteroid therapy [9]. Corticosteroids and IV immunoglobulin is the first-line therapy. [10] Indications for second-line therapy include patients with thrombocytopenia that's related to significant bleeding symptoms (e.g., mucosal purpura or more serious bleeding) or for patients with severe, persistent, or recurrent thrombocytopenia (e.g., platelet count <20,000/mm3) following glucocorticoid - based treatments. Second-line therapies for ITP include mycophenolate mofetil, dapsone, sirolimus, vincristine, 6-mercaptopurine, azathioprine, and danazol, among others. [11]

Considering the patient responded effectively to steroids during his first hospitalisation, our patient's first image was consistent with steroid-responsive ITP. He acquired tolerance to Dexamethason which was discovered during his 2nd visit to the hospital. Despite a platelet count of less than 11,000/mm3, he did not experience any significant bleeding. According to a research by the American Society of Hematology Education Program for the Management of ITP, our choice to start second-line therapy was acceptable since the patient had severe, chronic, or recurrent thrombocytopenia (e.g., platelet count 20,000/mm3).[12]

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IV. CONCLUSION:

Timely diagnosis and proper management is necessary in a rare case like thrombocytopenic purpura (ITP).

Among the ITP cases only 20-30% of these cases fail to respond to steroids which makes this case all the more rare.

CONFLICT OF INTEREST: There is no conflict of interest.

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