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<b>Thesis Title</b>	<b>Role of serum erythropoietin level in patients with absolute erythrocytosis</b>			
<b>Year</b>	<b>2013</b>			
<b>Abstract</b>	<p><b>Background:</b> The true polycythaemia (Absolute erythrocytosis) refers to an absolute increase in total body red cell mass, which usually manifests itself as a raised hemoglobin concentration and /or packed cell volume. Erythropoietin (Epo) is a hemopoietic growth factor that is essential in terminal maturation of erythrocyte precursor to mature erythrocytes. The Epo level provides some guidance as to the direction in which to proceed and the order and the extent of investigation necessary in an individual patient. Causes of an absolute erythrocytosis can be primary where there is an intrinsic problem in the bone marrow, called polycythemia rubra vera, and secondary where there an event outside the bone marrow driving erythropoiesis. Patients who cannot be assigned to either polycythemia rubra vera or secondary polycythemia are grouped together under the category of idiopathic erythrocytosis.</p> <p><b>Aim of study:</b> This study was done to identify the hematological parameters of absolute erythrocytosis and to determine the role of the serum Epo level in the diagnosis of absolute erythrocytosis and erythropoietin significance in pre and post treated PRV.</p> <p><b>Patients, material and method:</b> This study had evaluated 82 patients with absolute erythrocytosis (47 PRV, 20 SPC and 15 with IP) were referred to the national Center of hematology in AL-Mustansiria from September 2012 to February 2013. The patients were selected according to sequential visit to the center regarding age and gender. The study included 65 male and 17 female, with age range from 19 to 77 years.</p> <p>Criteria of patient inclusion are packed cell volume <math>\geq</math> 52% and/or hemoglobin more than 18.5 g/dl for male and packed cell volume <math>\geq</math> 48% and/or hemoglobin more than 16.5 g/dl for female were considered. Complete blood count, blood film and serum Epo were done for all patients, while bone marrow examinations were done only to the indicated patients.</p> <p><b>Results:</b> Mean packed cell volume of the studied samples is 55.96 % and mean serum erythropoietin level is 23.41mIU/l. The male to female ratio of is 3.82:1. Main complaints of the patients are headache found in 91.36%</p>			

and history of smoking in 56.09 %. Splenomegaly present in 62.96% with significant difference among three groups of polycythemia. There is a statistically significant difference among three groups regarding age, packed cell volume ,WBC count, platelets count, hemoglobin level, serum erythropoietin level and blood film findings of myeloproliferative disorder. There is a statistical significance in mean of erythropoietin between treated and untreated cases of polycythemia rubra vera and proper cutoff point of serum erythropoietin level to be used for differentiation is near the 4.9 mIU/L.

***Conclusions:***

- There was a significant difference among three groups of patients with AE regarding (age, splenomegaly, PCV level, platelet count, Hb level, blood film findings, BM and Elevel).
- The serum erythropoietin level was a simple, cheap and reliable test for diagnosis and differentiation between absolute erythrocytosis causes.
- There was a significant difference between treated and untreated cases of polycythemia rubra vera regarding packed cell volume and serum erythropoietin.