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Gum arabic acacia correlation with erythrocyte sedimentation among patients with elevated rate

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Introduction: Gum arabic acacia is a complex polysaccharide, aggregates of sugars and hemicelluloses composed of arabic acid nucleus. It is found in nature as slightly acidic calcium, magnesium, potassium or sodium salt and there are different metal ions present in gum arabic molecules. Chemically, it is an arabinogalactan-protein complex composed by weight of 17-34% arabinose, 32-50% galactose, 11-16% rhamnose, 13-19% glucuronic acid and 1.8-2.5% protein. Erythrocyte sedimentation rate (ESR) is a blood test measures how quickly erythrocytes, or red blood cells, separate from a blood sample that has been treated so the blood will not clot. A lab specialist will measure the rate that red blood cells settle toward the bottom of the tube after 1 hour. If one has inflammatory condition or cell damage, the red blood cells tend to clump together, became heavier, so they settle faster.

Materials & Methods: Instant soluble gum form (granulated one) was used in this trial case using 20 gm single solution in 250 ml drinking water or divided dose two times per day, in the morning and evening for one month. Twenty-four volunteers having elevated erythrocyte sedimentation rate with different inflammatory symptoms, three blood samples were taken, one as base line and after every two weeks for analysis.

Results: It was shown that the ESR levels in the blood decreases clearly as (before 70.70 +/- 15.00, and after two weeks 37.00 +/-9.19 with P-value 0.000 and 28.50 +/- 6.69 after next two weeks with P-value 0.000).

Conclusion: Gum arabic acacia, plays novel effect in increasing the blood viscosity which helps floating of the blood constituents, hence it decreases the sedimentation rate of the erythrocyte in the blood.

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