

## **Platelet rich plasma (PRP) a biogenic stimulator in treatment of Primary Atrophic Rhinitis**

### **Abstract:**

**Background:** Primary atrophic rhinitis (1ry AR) is a chronic nasal disease characterized by the loss of mucociliary clearance and presence of viscid secretions and dried crusts that causes a characteristic foul odor usually bilateral. A large range of treatment modalities had been tried yet there is still no agreement upon a curative treatment with long lasting success. The purpose of the study was to assess the value of platelet rich plasma as a biogenic stimulator for healing acceleration in primary atrophic rhinitis.

**Methods:** A total of 78 cases clinically diagnosed to have primary atrophic rhinitis were included. Nasal endoscopy, sino-nasal-outcome test-25 questionnaire, mucociliary clearance assessment by saccharine transit time test and biopsy specimens were achieved before, 1 month and 6 months after the application of platelet rich plasma in group A (cases) and platelet poor plasma in group B (controls).

**Results:** All patients in group A showed endoscopic improvement and reduction in the incidence of the most frequently encountered symptoms before platelet rich plasma injection including: nasal crusts 36(92.30%), foetor 31(79.48%), nasal obstruction 30(76.92%), anosmia 17(43.58%), and epistaxis 7(17.94%) to nasal crusts 9(23.07%), foetor 13(33.33%), nasal obstruction 14(35.89%), anosmia 13(33.33%), and epistaxis 3(7.69%) six months after and this was reflected in the reduction of the sino-nasal-outcome test-25 scores which was averaged (40) before platelet rich plasma to (9) 6 months after. Similarly, the mucociliary clearance time was significantly reduced after platelet rich plasma injection, saccharine transit time test was initially averaged at (1980 s) and got reduced to (920 s) 6 months after platelet rich plasma injection.

**Conclusion:** The use of platelet rich plasma as a biogenic stimulator is a possible innovative less invasive approach that can be effective in repairing tissue dystrophy through further future studies.

**Key words:** Primary atrophic rhinitis, platelet rich plasma, mucociliary clearance, Saccharine Transit time Test.