**“EFFECT OF NSAIDs ON LENS MEMBRANE PERMEABILITY IN EXPERIMENTAL CATARACT”**

Umesh More1, Sarita A.Shinde1, Arti M. Hajarnavis2 ,A.N.Sontakke3,P.M.Bulakh2

1Department of Biochemistry, Pad.Dr.D.Y.Patil Medical College ,Pune, Maharashtra India.

2Bharati Vidyapeet (Deemed University) Medical College, Pune

3MIMER Medical College, Talegaon Dabhade, Pune

**……………………………………………………………………………………………………………………………………………..**

**Abstract:**

**Introduction:** The present study was designed to understand the mechanism of lens protection and biochemical basis of cataract formation.

**Methodology:** The H2O2 induced experimental cataract model was chosen. These lenses were subjected to “Lens organ culture technique”. The cultured lenses were categorized as control group and Experimental groups. To study the effect of NSAIDs (Aspirin and Paracetamol) on lens ATPase activity in H2O2 induced cataract. The study enrolled total 210 fresh goat lenses were analysed.

**Observations :** It was observed that concentration of K+, Mg++ and Ca++ was significantly decreased and Na+ concentration was increased in H2O2 inducedcataractous lenses. In presence of ouabain electrolytes levels were increased. Lenses, on addition of aspirin and paracetamol, showed significantly increased concentration of K+, Mg++ and Ca++ whereas the concentration of Na+ was decreased and the specific activities of ATPase systems showed increase in experimental cataractous lenses. Aspirin and paracetamol in presence of Ouabain, showed decreased concentration of Na+ and increase in K+ Ca++concentration.The specific activity of Na+-K+ATPase and Mg++-ATPase was increased.

**Conclusion:**The therapeutic efficacy of these NSAIDs by way of their inclusion in anticataractous drugs is a matter of consideration in formulating pharmacologically suitable anticataract agents.

**Key words:** Experimental cataract, Nonsteroidal anti-inflammatory drugs (NSAIDs), lens ATPase activity

**……………………………………………………………………………………………………………………………………………..**