## ABSTRACT

**Title-** A Study On Correlation Between Clinical Prognostic Markers Glycated Hemoglobin (HbA1c), ESR And CRP Levels And The Stage Of Disease In Malignant Otitis Externa

**Background and Objectives-** Malignant otitis externa (MOE) is an aggressive and potentially life threatening infection which affects the soft tissues of the external ear and surrounding structures and has the propensity to rapidly spread to the skull base and the periosteum .The objectives of this study was1)To establish a clinical correlation between the stages of MOE and biochemical markers namely Glycated Hb (HbA1c) ,CRP and ESR levels. 2. To identify improvement in clinical symptomology in MOE following treatment. 3.To correlate with the duration of Diabetes mellitus with treatment outcome.

**Methodology-** Patients with diabetes mellitus, otalgia and ear discharge presenting to ENT opd were subjected to detailed history and clinical examination. Otoscopic examination under microscope was done to look for external canal oedema, granulation tissue, bone erosion and TM perforation .Pus from the EAC was taken for culture and sensitivity under aseptic precautions. Baseline glycated hb, ESR and CRP levels and HRCT temporal bone in axial and coronal planes was done. According to clinical findings and CT findings the patients were staged using Chandlers clinic pathological staging .IV antibiotics and IV paracetamol and local aural washes were given.

Patients were followed up after 1st and 2nd month. Otoscopic examination under microscope was repeated .Pus from the EAC was taken for culture and sensitivity under

aseptic precautions and glycated hb, ESR and CRP levels was send. Patients will be staged again according to Chandlers classification.

**Results –**

1) Fall in the levels of Glycated HbA1c serves as a good prognostic indicator of the disease
2) The duration of diabetes has no significant impact on the disease prognosis
3) The most common etiologic agent is Pseudomonas aeruginosa
4) In spite of improvement in clinical features and inflammatory parameters there was no improvement in clinical staging with treatment.
5) There was a significant fall in ESR and CRP values after treatment for 2 months with antibiotics and analgesics

**Conclusion-** In conclusion, MEO is an invasive, potentially life-threatening infection of the external ear which rapidly spreads to the skull base in uncontrolled diabetics and immunocompromised patients. Response to therapy can be monitored by ESR, CRP and glycated HbA1c. The study highlights the need to control this infection with medical line of treatment reinforcing the fact that the role for surgical management is limited for stage 1 , 2 and 3.