

## Summary

The objective of this work was to study the role of pH changes in acute otitis externa and its effect on inflammatory process in external auditory canal, to study and compare the effect of topical antibiotic versus topical acetic acid eardrops in the treatment of acute diffuse otitis externa.

In this work, patients were divided into:

**1. Control group (A).**

**2. Study groups:**

**Group (B):** Group of patients suffering from acute diffuse otitis externa treated by using antibiotic ear drops.

**Group (C):** Group of patients suffering from acute diffuse otitis externa treated using acetic acid ear drops.

All patients were subjected to the following:

1- Complete history taking.

2- General examination.

3- ENT examination to evaluate AOE, Pushing the tragus, so typically causes pain in this condition as to be diagnostic of external otitis on physical examination, pH status of the EAC at the base line visit.

5- Swabs were taken from the external auditory canal skin lining under aseptic conditions.

6- Swabs were transmitted directly to the laboratory, one swab was used for making smear that was stained with gram stain and the second was used for culture on selective bacteriological media.

7- Management according to the study using acetic acid drops or antibiotic ear drops for comparison.

8-follow up of cases in the first visit after seven days, second after fourteen days and the last one after the third week to determine the completely relived cases and submit that to statistics to be done

9- Follow up after twenty one to forty two days to detect the recurrence that might happened in completely relived cases.