<u>SUMMARY</u>

Interferons (IFNs) are cytokines produced by lymphocytes and macrophages whose antiviral, anti-tumoral and immuno-modulatory properties are increasingly exploited for therapeutic purposes. . PEG-interferon and ribavirin combination therapy for the treatment of hepatitis C virus (HCV) is well known to be associated with significant adverse effects such as flu-like syndrome, anosmia, haematological, infectious, cardiovascular, renal, autoimmune, and psychiatric problems, auditory complaints due to IFN alpha administration are rare **(Chung and Older, 1997).** the present research was designed to study the effect of dual treatment with interferon and ribavirin on hearing and on cochlear hair cells in chronic Hepatitis C virus patients. This study was carried out on 50 patients with compensated chronic HCV.

In this study according to OAE that is done before, during and after treatment course we found that 10/50 failed (8 unilateral &2 bilateral) and 40/50 pass at 6st month of therapy. After cessation of treatment the affected cases 10/50(8 unilateral &2 bilateral) still failed **(table 3)**. All patients showed excellent speech discrimination

Also we found no significant change in tympanometry results during course of treatment with interferon regarding time of administration either pre or med or after treatment so we concluded that there is no association between treatment with interferon and tympanometry results **(table 4)**.

Regarding the audiometry there are 30 cases (60%) without noticeable change & 20 cases (40%) with SNHL, hearing loss is in bone and air conduction at the same level. It occurred bilateral and unilateral, it occurred bilateral in 6 cases, 4 of them returned totally to normal after termination of therapy while 2cases returned but less than normal.

It occurred unilateral in 14cases (8 left ears & 6 right ears), 6 cases of them (4 Lt &2 Rt) returned totally to normal after termination of therapy, 6 cases returned but less than normal (3 Lt & 3 Rt)while 2 cases (1 Lt &1 Rt) persist after the course of therapy**(table 8,9,10).**

The Audiometry shows that there is significant difference between reading of day befor treatment and day 7, 21, 30, 60, 1month after treatment & 2 month after treatment course finished.

Also there is significant difference between reading of day 7 and 1,2 month after treatment course finished but no significant difference between day 7 and day 21,30& 60, and significant difference between reading of day 21 and 1,2 month after treatment course but no significant difference between day 21&30,60. There is no significant differences between day 30 and day 60 Also there is no significant difference between reading of 1 & 2 month after treatment course and between 1month & 2 month after treatment.**(table 6 &7).**

And also we found that there is significant positive correlation among Audiometery reading in different times of interferon treatment course **(table 11)**