VII. SUMMARY

The aim of this study could be mentioned as follows:

a) To proove the role of anaerobic organisms in the pathogenesis of chronic, persistent muco-purulent rhinorrheo in children.

b) To test the in vitro susceptibility of Five antimicrobial drugs against the isolated anaerobes and the study of their effectiveness survey.

c) To find new procedures for the therapeutic management for the catarrhal child syndrome.

- Review of literature about bacterial infection of the nose and paranasal sinuses since 1928.
- Review of literature concerning the role of anaerobic organisms and their pathogenesis in muco-purulent nasal discharge were given.
- Review of available drugs against anaerobics also mentioned.
- 50 cases of chronic, persistent muco-purulent rhinorrhea in children were selected for this study.
- Samples from the discharge were taken under strict anaerobic condition & sent for both anaerobic and aerobic culture, isolation and bacteriological

identification using anaerobic jar, gas-packs & special anaerobic culture media.

- In Vitro susceptibility of obligate anaerobes were done against five anti-microbial drugs.
- The results were the isolation of 67 bacteria, 38 were aerobic or facultative while 29 were obligate anaerobes.
- Obligate anaerobic strains corresponds to 43.2 % of the total.
- The percentile incidence of each species were defined e.g. Bacteroides fragilis alone accounted for 44.4 % of all anaerobes.
- Aerobic bacteria was (56.7 %) of the total isolates & D. Pneumonia encountered in (34.2 %).
- The types, numbers and percentage of all the isolates were tabulated.
- Discussion of these results include analysis and comparison with other similar results.
- Hypothesis of routes of access are also discussed, the anaerobes could be easily reach the nose by the exogenous route and auto-inoculations.
- Many of the patients studied in this series live under bad hygienic condition, slums and poor areas.

- A new clinical term "Nasal anaerobiosis" could be an important factor in the persistence, recurrence and refractory muco-purulent rhinorrhea in children. A factor which is neglected in most of references as well as E.N.T. text books.
- The result of in-Vitro susceptibility of all obligate anaerobes isolated in this series showed a high degree of sensitivity towards metronidazole (Flagyl).
- While only 70 % were sensitive to both Rimactan and Negram.
- A final conclusion could be reached that in each case of persistent chronic muco-purulent nasal discharge in children a trial to isolate, culture and identify obligate anaerobic organisms must be done.
- A new protocol for management of such cases was suggested in the form of both surgical and medical measures. Every case must be treated according to its own merit. The common background for those persistent cases is the presence of mixed infection and the start of proper auxillary measures e.g. adenoidectomy, aspiration and areation, before the start of the 2 antimicrobial agents, one of them should be specific anaerobicial according to culture and sensitivity test. Such combination helps the eradication of anaerobes from the nose and sinuses and put the patient on the proper line of final cure.