

**ORIGINAL RESEARCH**

# 14D Topical Fluoroquinolone Ear Drops For Tubotympanic Type CSOM Management: A Prospective Study

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**Abstract**

**Background**-Chronic suppurative otitis media is a chronic inflammation of middle ear cleft with recurrent or persistence discharge and permanent perforation in Tympanic membrane. Due to prevailing csom especially in Tubotympanic type there are various method of treatment prevalent. We here want to study on topical application of fluoroquinolone for 2wks for control of disease in discharging ear & Efficacy of topical antibiotic to control discharge in tubotympanic type csom.

**Methodology**-A total of 60 patient taken of OPD from Otolaryngology department at JPN Hospital, Gaya during one year between 1st August 22 to 31st July 23. All patient given 3drops fluoroquinolone (Moxifloxacin) ear drop 3times for 2wks to tubotympanic type of csom with active discharging ear. Those having mixed infection and atticofacial diseases excluded.

**Result**-Out of 60 patients 57(95%) got relieved. There is no matter of age, sex and duration of disease. There was very minimal side effect as earache, dizziness, dermatitis that subsided latter. After addition of systemic antibiotic and proper medication, we achieved also the dry ear in remaining cases.

**Conclusion**-Topical fluoroquinolone ear drops for 2wks is very effective in controlling disease without adding systemic antibiotics. It is also cost effective. Minimal side effect and less chance of developing resistance.

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**Introduction**

Chronic suppurative otitis media is defined by various authors but according to WHO it is chronic inflammation of middle ear cleft with recurrent or persistence ear discharge and nonintact tympanic membrane for atleast 2wks. It is classified in two categories: Atticoantral and Tubotympanic but recently in five as active, inactive, mucosal, squamosal and healed type. It is more prevalent in low socioeconomic, poor hygiene, lack of breastfeeding, paediatric population and recurrent Eustachian tube dysfunction. Although its complete management is after surgery but to manage active disease in cost effective, less systemic side effect and more acceptable way is application of topical antibiotic. Pseudomonas is most commonly isolated bacteria then Staphylococcus and then various Gm -ve bacilli as Bacillus, proteus, H.Influenzae & Enterococci. It is seen that Fluoroquinolone especially Moxifloxacin is more sensitive for various otological flora. It is much safer in pregnancy and children. Commonly we encounter with greenish discharge that is due to Pseudomonas that is sensitive with fluoroquinolones.

**Materials & Methods**

In our study we collected data of one year duration from outdoor of Otolaryngology dept. at JPN Hospital, Gaya between 1st August 22 to 31st July 23. We have taken 60 patients of tubotympanic type with active discharging ear. All patients were given for 2wks topical moxifloxacin and followed latter. Those had taken antibiotics, atticofacial diseases, diabetes, immunocompromised state and mixed infection were excluded from the study. We had given medication irrespective of age, sex and duration of diseases.

**Results**

Out of 60 pts. 57 got resolved that is about 95%. Among those 40 were male with mean age 34.12 years and 20 were female with mean age 31.68 years. M:F is 2:1 and mean age was 33.2+/-8.7 years. Mean duration of discharge was 55.2 days(SD+33.3) with minimum of 14days and maximum of 140 days. Left ear(33) is more affected than right ear(27). One among 3 who failed to resolve shows fungal growth that resolved after cleaning and giving antifungal. Rest 2 managed after proper cleaning and medication.

Among 60 patients 9 shows adverse effect eg. Ear ache, dizziness and dermatitis that further managed symptomatically.

|                         |        |    |
|-------------------------|--------|----|
| Gender                  | Male   | 40 |
|                         | Female | 20 |
| Resolution of discharge | Yes    | 57 |
|                         | No     | 3  |



**Discussion**

There was vast population that suffer from csom and there is lacking of study for cost effective management of tubotympanic with active discharging ear. Some advocate for additional systemic antibiotic and some for antihistaminics. A trial was reported in 2003 for comparison of topical fluroquinolone to topical aminoglycoside with encouraging result. A study by Mittal et al concluded that topical antibiotic with cleaning is first line treatment In 2000 Acuin et al do the randomized controlled study over 1660 participant and found that topical fluoroquinolone is more effective. Topical medication with 86% success. In 2006, Carolyn conducted study on 9 randomized trial over 833 participant and his study published in cochrane data base concluded that topical quinolones can resolve discharge better than systemic one. Organisms isolated from ear discharge were highly susceptible of fluoroquinolones. Only 0.25% organisms shown resistance to the above antibiotics.

**Conclusion**

It is very cost effective to use first line medication as topical moxifloxacin for 2wks that resolve ear discharge better than adding systemic drugs. Adding systemic antibiotics and medication causing adverse effect sometimes serious as extensive stomatitis and rapid evolving drug resistance. Safe to use in pregnancy and in young children. We must have to educate people as Practitioner, Physician, Paediatrician

first use topical fluoroquinolone for 2wks then go for additional systemic one. Ethically had taken permission.

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