



## **Evaluation of Povidone iodine wick in treatment of Chronic Suppurative Otitis Media (Tubotympanic type)**

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### **Abstract**

Chronic suppurative otitis media is a common infection in developing countries. Its either Tubotympanic or Atticoantral. Knowledge of the treatment of resistant cases of tubotympanic disease will result in good clinical recovery and will decrease the need for surgery in such cases.

**Keywords:** Otitis media, tubotympanic disease, Tubotympanic.

### **Introduction**

CSOM is chronic inflammation of middle ear and mastoid cavity (1). Its of two types either tubotympanic or atticoantral (2). Antimicrobial therapy is used to eradicate the bacterial agents causing otitis media but most of the bacterial agents are acquiring antibiotic resistance (3).

Atticoantral is usually treated by surgery (4). But tubotympanic type only needs surgery in resistant cases. Many of these tubotympanic type resist treatment and may needs surgery if perforation is persistent and cause clinical symptoms such as otorrhea and deafness(5).

### **Aim of the study**

To evaluate efficacy and safety of the use of daily Povidone Iodine wick in the treatment of tubotympanic variety of chronic suppurative otitis media that not respond to medical treatment.

### **Patients and Methods**

This study was carried out at the outpatient department of Baaquba Teaching Hospital since 9<sup>th</sup> of April 2015 to the 11<sup>th</sup> of April 2016. We took 50 A total patients with tubotympanic CSOM (depending on site and type of perforation) that had culture and sensitivity show *Pseudomonas aeruginosa* sensitive to ciprofloxacin. Clinical response to treatment is recorded on clinical, otoscopic and or microscopical examination. We advice patients to use treatment regularly, then we took patients that are not respond to the medical treatment and arrange daily betadine wick (povidon iodine 10%) from 4p.m.to 12 p.m. of next day and this for 7 days and we followed the results.

### **Inclusion criteria**

- 1-Patient aged 18-70 years old.
- 2-Patient with diabetes mellitus.
- 3-Patients with complaint more than three weeks.
- 4-patients treated elsewhere for the same complaint.

### Exclusion criteria

- 1-Patients with acute suppurative otitis media (less than three weeks)
- 2-Patients with suppurative otitis externa.
- 3-Patients with grommets in situ.

All 50 patients given treatment ciprofloxacin tablet. 500mg twice daily with ciprofloxacin drops thrice daily for 10 days and we followed them, we found that there are 9 patients not respond to this protocol, so we went with these 9 patients to another protocol and arrange daily Betadine (10%) wick from 4p.m. to 12p.m. of the next day for 7 days.

### Results

A total of 50 patients were included in the study, aged between 18 and 70, I choose patients with chronic suppurative otitis media that have central perforations, and their discharge cultured with results that it had pseudomonas infection and sensitive to ciprofloxacin, so I choose these criteria only in my 50 patients, and every patient has other result in the culture and sensitivity test I neglect him, when I gave treatment (10 days of ciprofloxacin tab. 1x2 and drops 1x3 according to culture and sensitivity) 41 patients were respond very well to this treatment, clinically (no discharge, better hearing) and otoscopically (dry with no congestion). 9 of these 50 patients not respond to the treatment and the discharge continue.

So I start another regime of treatment with them, I arrange daily wick soaked with Betadine 10% from 4p.m. to 12p.m. of the next day, I push the wick on the tympanic membrane by dressing forceps. All the 9 patients respond very well and discharge stop, dry clean perforation.

### Discussion

Most of cases of chronic suppurative otitis media of tubotympanic variety are respond to medical treatment, many cases may not respond inspite of culture and sensitivity and even we may reach to the

need of surgical intervention such as cortical mastoidectomy with or without tympanoplasty, this resistance to treatment may progressively increase damage to middle ear structures. In my study, the use of Betadine wick is very useful in treatment of resistant cases of chronic suppurative otitis media, and by this we may escape surgery. This is comparable with a study in our country that use povidone iodine 5% as a drops not wick(6) also comparable with other studies abroad that show efficacy of povidone iodine drops(7).

### Conclusion

My study reveals that the use of 10% povidone iodine wick in treatment of resistant cases of chronic suppurative otitis media of tubotympanic variety as a daily regime for one week is very effective and very cheap.

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