

# Remedial Effects of Homeopathic Drugs Against Chronic Suppuration of Ear

Nazmul Hasan<sup>1</sup>, Nazmul Ahsan<sup>1</sup>, Latiful Bari<sup>2</sup>, Anwarul Azim Akhand<sup>1\*</sup>

<sup>1</sup>Department of Genetic Engineering and Biotechnology, University of Dhaka, Dhaka-1000.

<sup>2</sup>Center for Advanced Research in Sciences, University of Dhaka, Dhaka-1000

Email of corresponding author: [akhand@du.ac.bd](mailto:akhand@du.ac.bd)

## Abstract

Chronic Suppurative Otitis Media (CSOM) is a common infectious disease of middle ear characterized by a persistent discharge through a perforated tympanic membrane. Indiscriminate use of antibiotics for treating CSOM promotes antibiotic resistance leading to accelerated health risks. Homeopathic medicines are mostly free from side effects and therefore this study was conducted to evaluate the remedial effects of selected homeopathic medicines against CSOM. A total of 70 (CSOM patients-40 + healthy-30) subjects were included in this study. The CSOM patients were randomly consigned for daily administration of homeopathic medicines such as tellurium metallicum (n=17), mercurius solubilis (n=13) and calcarea sulphurica (n=10) for 8 weeks. The homeopathic medicines did not show significant antibacterial activity when patients' aural swab was assessed by agar disc diffusion; however, they reduced average microbial load significantly. Ear suppuration was prevented in all of the patients treated with the medicines. Around 50% of perforated tympanic membrane in patients was healed by tellurium metallicum and calcarea sulphurica. CSOM-mediated hearing impairment was greatly improved at 1, 4, 8 and 12 kHz frequencies by the use of all three medicines. This study, therefore, provides conclusive evidence that homeopathic medicines prevent ear suppuration in CSOM patients as well as reduce microbial load, heal perforated membrane and improve hearing.

## Methodology

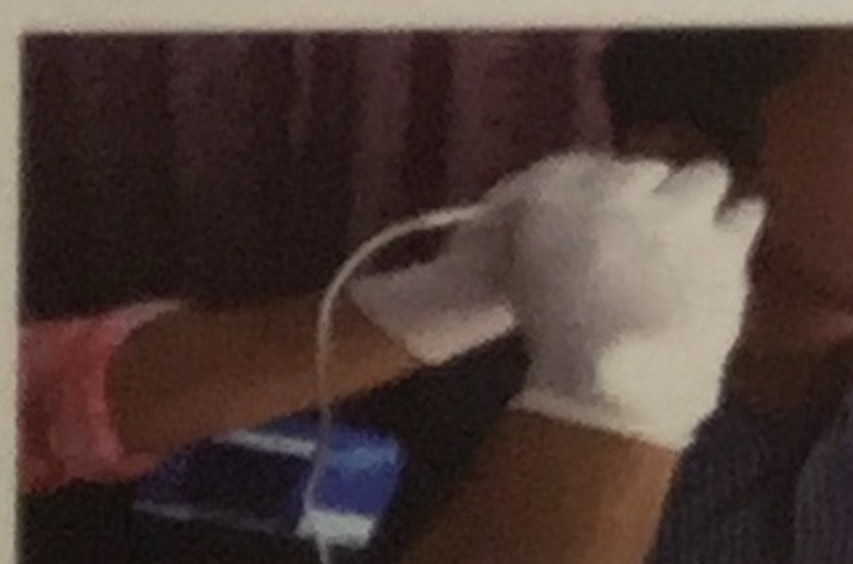


CSOM patients

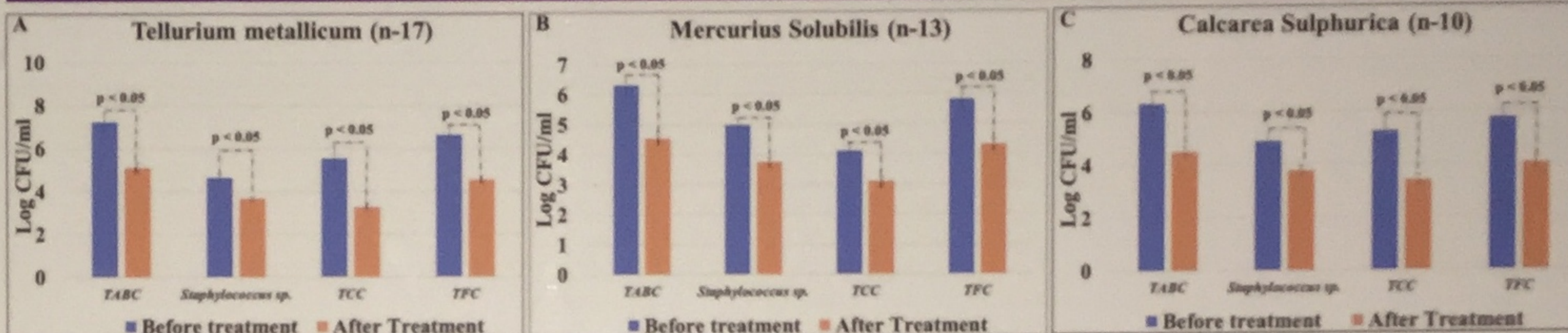
Microbiological analysis of aural swab

Observation of tympanic membrane using a digital endoscopic otoscope.

Measuring hearing threshold by giving sound signal using an iPod



## Homeopathic Medicine Reduced Microbial Count

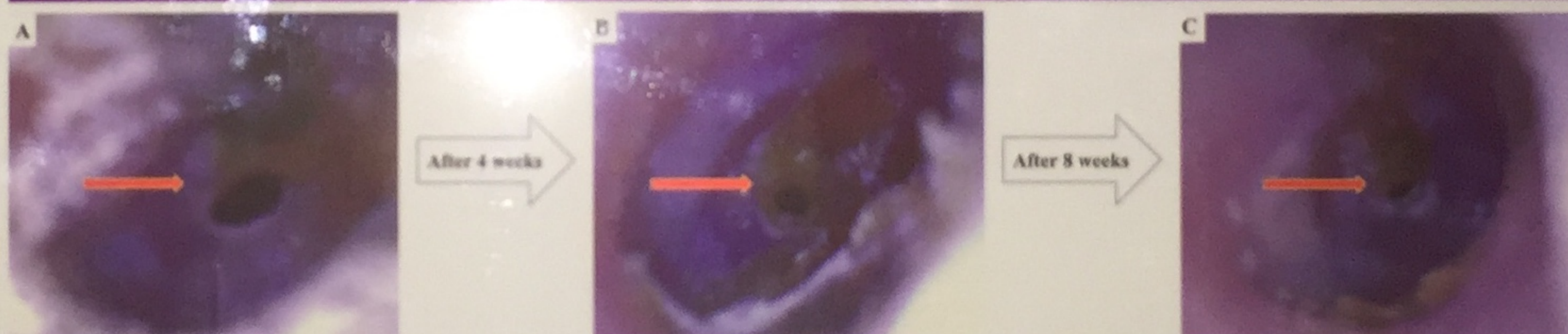


All the three homeopathic medicines significantly reduced total microbial count. TABC: Total Aerobic Bacteria Count, TCC: Total Coliform Count, TFC: Total Fungal Count

## Homeopathic Medicine Prevented Ear Suppuration and Tympanic Membrane Perforation

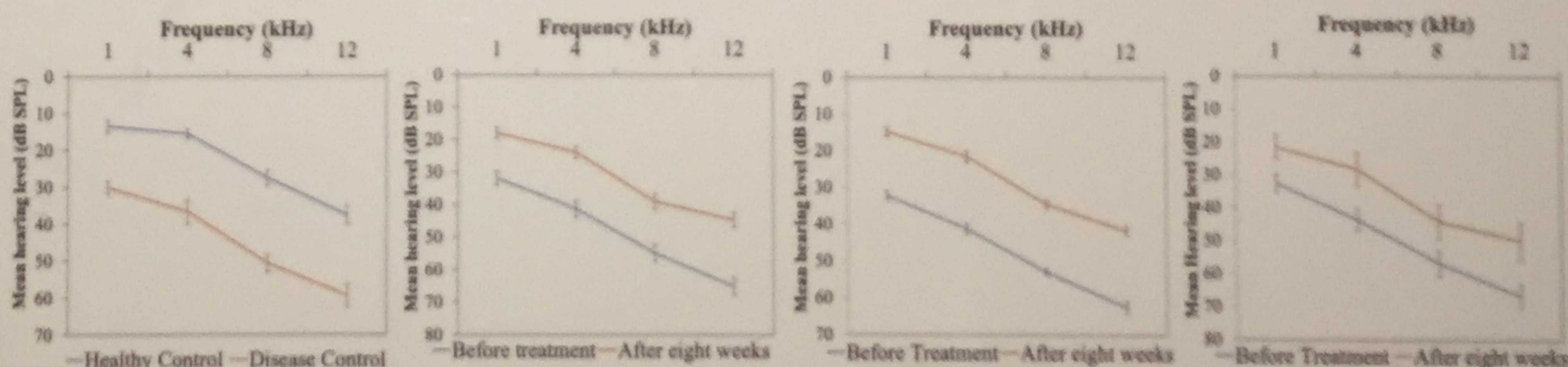
Homeopathic medicines used for treatment	Total no. of patients treated	Ear suppuration		Tympanic membrane perforation	
		Before treatment	Prevented after treatment	Before treatment	Healed after treatment
Tellurium metallicum	17	17	17	17	9
Calcarea sulphurica	10	10	10	10	5
Mercurius solubilis	13	13	13	13	0

## Gradual Healing of Perforated Tympanic Membrane by Tellurium Metallicum



Calcarea sulphurica also demonstrated similar result.

## Homeopathic Medicines Improved Hearing Thresholds



Hearing was deteriorated in CSOM patients compared to control. Homeopathic medicines improved hearing at all the frequencies tested.

## Results

### Characteristics of the Study Participants

Variable	Participants	Control	Treated
Total No.	70	30 (42.85%)	40 (57.17%)
Gender			
Male: n (%)	42 (60%)	18 (60%)	24 (60%)
Female: n (%)	28 (40%)	12 (40%)	16 (40%)
Age			
Male	34.96±2.66		
Female	28.25±2.33		
BMI Kg/m <sup>2</sup> (Mean ± S.E.)	24.41 ± 0.69	25.46 ± 0.92	24.13 ± 0.82
BMI category			
Underweight	4 (5.71%)		4 (10%)
Normal weight	27 (38.57%)	22 (73.33%)	19 (47.5%)
Overweight	39 (55.71%)	8 (26.66%)	17 (42.5%)
Duration of Disease			
≤ 2 years			8 (20%)
> 2 years			32 (80%)

## Discussion

Antibiotics are usually prescribed for treating CSOM, however, excessive use of antibiotics is rendering various microorganisms resistant to antibiotics creating serious health problems. Under these circumstances, a cost effective alternative treatment of CSOM would be well appreciated to control infections and related disorders. This study presents a light of hope of using homeopathic medicines as an alternative to antibiotics and other related treatment process.

## Conclusion

In CSOM patients, homeopathic medicines—

- Prevented ear suppuration.
- Reduced microbial load in aural swab.
- Healed perforated tympanic membrane.
- Improved hearing at all the frequencies.

The results of this study present a light of hope of using homeopathic medicines as a cost effective alternative therapy.