

Chronic Suppurative Otitis Media (CSOM) without Cholesteatoma: A Matter of Concern in Internally Displaced People of North Waziristan Agency, KPK

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ABSTRACT

Objective: The objective of the study was to evaluate the frequency and risk factors for CSOMWC in children of IDPs of North Waziristan Agency during military operation "ZARB-E-AZAB" started in July 2014.

Study Design: Observational study / cross sectional

Place and Duration of Study: This study was conducted at the ENT Department, DHQ hospital Bannu and two main clinics serving major populations of the IDPs from 3rd December 2014 to 5th May 2015.

Materials and Methods: Data was recorded during the child's visit to the hospital & respective clinic by means of a structured interview with the parents, examination of the patients by otoscopy and by taking info from preceding medical history

Results: Comparison was made between 180 children having the disease to 150 controls with similar age group who reported in ENT opd & ENT clinics. The calculated six month's incidence was 180/1000 children 1 to 15 years of age. Meaningfully, increased jeopardy for CSOM was related with a history of acute and recurrent otitis media, a maternal history of COM (chronic otitis media), bigger families and more brethren. The sex, parental age and education, allergy, sinusitis and recurrent URTI were associated with chronic suppurative otitis media.

Conclusion: Tympanomastoid surgery is taken into consideration as standard management for CSOMWC, which is unresponsive to oto-topical/oral antimicrobial therapy. Acute and recurrent otitis media, a parental history of chronic otitis media, larger families and more siblings, the sex, parental age and education, allergy, sinusitis and recurrent upper respiratory tract infections are important risk factors for CSOM. In order to improve outcomes, we should modify and cope the controllable risk factors to preclude this life condition.

Key Words: CSOM, IDPs, Cholesteatoma

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INTRODUCTION

Pakistan is a developing country. Per capita income is too low. Illiteracy and poverty are the chief problem for avoiding hospitals to get treatment. Children's parents or caretakers are unaware of CSOM (chronic suppurative otitis media) and do not know its concerns. The residents of the areas like Waziristan agencies are the main victim of this health problem.

(CSOM) Chronic suppurative otitis media is well-thought-out to be the most common ear ailments ^{1,2} in many of the developing countries including Pakistan. It is the most communal reason of insistent mild to moderate hearing damage in children and young adults.³

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The etiology and pathogenesis of otitis media are multi factorial including genetic, infections, allergy, environmental, social and racial factors and Eustachian tube dysfunction.⁴ Throughout the current decade, the frequency of chronic suppurative otitis media has intensely dropped due to developments in housing, hygiene and antimicrobial chemotherapy.⁵ Still some factors including unawareness, poverty and traditional views are the major risk factors for not taking treatment.

CSOM includes a series of middle ear's inflammation, infection, ulceration and granulation. There is a pus-filled emulsion through a pierced tympanic membrane which persists for more than 42 days. Technical complications involve hearing loss, mastoiditis, cholesteatoma, brain abscess, facial nerve paralysis, meningitis, and sigmoid sinus thrombosis.⁶

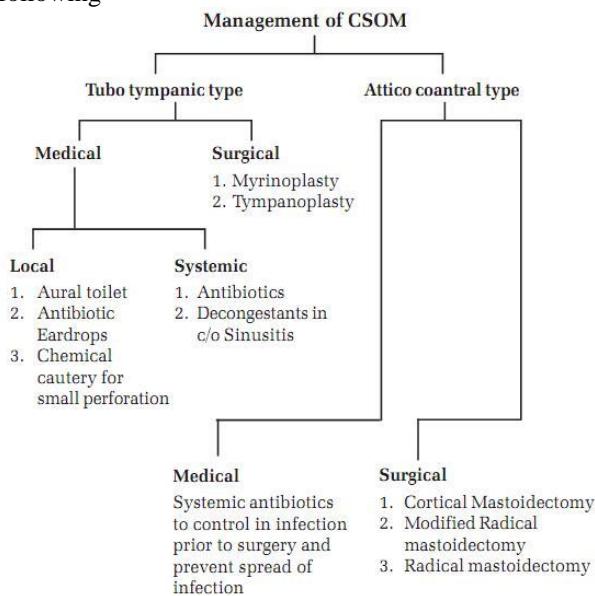
According to "World Health Organization" (WHO) approximations, 65–330 million persons are affected by CSOM globally, whose majority is in the developing countries. In UK, CSOM ratio varies between 0.9% and 0.5% of children & grown-ups respectively. Conversely, the ratio is 12–50%⁷ in developing countries as well as in the Australian Native population. CSOM and

cholesteatoma are regarded as diseases of paucity; and culture does not account for the pervasiveness of both situations.⁸

CSOM, with or without cholesteatoma accounts for up to 80% of the total hearing damage; of which, 90% cases testified in under developed republics. In children, the effects are seen on speech, language, intellectual, psychological and social development and education. Additionally, adults are probably hurt from personal and social disgrace with decreased employment opportunities.

In July 2014, approximately 10, 00,000 IDPs came from North Waziristan agency due to military operation against anti-state forces and entered into district Bannu and its surroundings. Mostly victims arrived from an environment having poor food choices, highly disease rates, insufficiency of income, mobbing and limited healthcare facilities. Seeking health knowledge is a high precedence for relocation and this is compromised with even a mild to moderate hearing loss.⁹ The general practitioner who first sees a newly arrived IDP may not have knowledge of their patient's complex and unique health issues.^{10,11}

The pictorial management of CSOM is presented in the following



following risk factors contribute towards the incidence of CSOM.

- Numerous incidents of acute otitis media (AOM).
- Overcrowded living system.
- Being a member of a large family.
- Attending daycare.

Parental education studies, flaccid smoking, breastfeeding, socio-economic position and the yearly no of upper respiratory tract infections (URTI) show questionable associations only.

Craniofacial irregularities upsurge risk: cleft lip or palate, cri du chat syndrome, choanal atresia, Down's

syndrome and microcephaly, all increase the risk of CSOM.

American Academy of Otolaryngology-Head and Neck Surgery experts' panel displayed guidelines for the treatment of chronic suppurative otitis media (CSOM). The experts of the panel stressed upon the use of topical antibiotics alone as a first-line therapy for patients, without systemic infection. In case of systemic infection, oral or parenteral antibiotics are advised.

Literature review shows only a slight risk of sensorineural hearing loss in humans having topical aminoglycosides and higher risk of vestibular toxicity. Fluoroquinolones do not have potential for ototoxicity and downgrade aminoglycosides to a secondary treatment substitute. The use of aminoglycoside drops in the presence of fluoroquinolone subsequently progress hearing loss.

Patients, who develop CSOM, are generally recommended to evade swimming however, if swimming is imperative, care should be done and ears should be kept dry. Due to small evidences, consensus among experts is missing. Some advice ear plugs until perforations are extruded while others do not.

The purpose of this study was to evaluate the incidence and risk factors for chronic suppurative otitis media without cholesteatoma in children of IDPs of North Waziristan Agency during military operation "ZARB-E-AZAB" started in July 2014 and as a result of that, IDPs were migrated to Bannu district particularly.

MATERIALS AND METHODS

This is a observational / prospective cross sectional study among 1000 children aged between 1-15 years. The mean age was calculated as 14.5 years. All the children were examined otoscopically, from 3rd December 2014 to 5th May 2015 and looked for patients with a diagnosis of CSOM without cholesteatoma. Data were analyzed statistically using frequency and percentage. Follow up of management outcomes was not part of this study.

RESULTS

Table No.I: Number and gender of patients diagnosed with CSOMWC

| Patients age group (years) | Gender of patients | | Total n=1000 | %age |
|----------------------------|--------------------|--------------|--------------|------|
| | Male n=600 | Female n=400 | | |
| CSOM without cholesteatoma | 105 | 75 | 180 | 18 |

Out of 1000 children, 65% (n=600) were male and 35% (n=400) were female. Prevalence of CSOM without cholesteatoma was 18% (n=180) of the total patients. Male % prevalence was 58.33 (n=580) while female % prevalence was 41.66 (n=420). The results are mentioned in table 1.

DISCUSSION

No work is done on pervasiveness of CSOM without cholesteatoma in newly arrived IDPs, though unreliable evidence suggests that hearing damage is common in refugees. IDPs come to district Bannu from a region of higher concentration of the disease to an environment where occurrence is lower.

This study ratifies that the clinical prevalence of CSOM without cholesteatoma in this group of newly arrived IDPs imitates the occurrence in their area of origin and hence, is higher than in the rest of the settled areas.

The incidence of the disease without cholesteatoma will make relocation more perplexing because of the resulting deafness and subsequent difficulty with language skills, socializing, education and employment. General practitioners should be aware of this and add otoscopy and possibly hearing tests to the screening protocol for all newly arrived IDPs.

Edification to differentiate between CSOM, AOM and OE is imperative as the management for AOM and OE will have no influence on CSOM and might really be disadvantageous. Advocacy may be desirable to guarantee that adults with CSOM who come from a refugee background have access to evidence based ciprofloxacin treatment and hearing services.

CONCLUSION

The prevalence of CSOM can be reduced through health education through Society health programs. Socioeconomic status and health care facilities can also be a helping hand in reducing CSOM onset. However, conducting health camps is one of the most important means to search for disease and treat it accordingly. As our study had high prevalence of chronic suppurative otitis media without cholesteatoma than other studies done in school children, the authors recommend free health camps, especially for ear diseases, in different parts of KPK particularly and in the country generally.

Author's Contribution:

Concept & Design of Study: Mohammad Iqbal
 Drafting: Mohammad Iqbal
 Data Analysis: Mohammad Iqbal
 Revisiting Critically: Mohammad Iqbal
 Final Approval of version: Mohammad Iqbal

Conflict of Interest: The study has no conflict of interest to declare by any author.

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