

A Study on Quality of life in patients with Chronic Suppurative Otitis Media: A prospective hospital based study

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Abstract

Introduction: CSOM (chronic suppurative otitis media) can have impact on QOL (quality of life) of patients. CES (chronic ear survey) is validated and reliable tool for measuring QOL. **Objective:** The purpose of the present paper is to study QOL using CES in patients with unilateral or bilateral CSOM. **Material and methods.** This descriptive prospective hospital based study was done on patients with CSOM who came to department of ENT, GMC & AH as OPD or indoor patients for tympanoplasty. QOL was measured using three subscales of CES and results were recorded, tabulated and analysed using appropriate statistical tests. **Results:** A total of 40 patients were included in the study with 21 males and 19 females. The average score found in our study was 46.94 with standard deviation of 19.89.

Keywords: QOL, CSOM, CES.

INTRODUCTION:

Chronic Suppurative Otitis Media (CSOM) is persistent inflammation of the middle ear or mastoid cavity (1). Symptoms usually include ear discharge and hearing loss/ conductive hearing loss. It is a common cause of hearing impairment and disability. Early diagnosis and treatment will prevent the disability. Although the incidence of CSOM is decreasing in developing countries because of use of antibiotics and improved hygiene but still there are good number of cases present in India .CSOM can have impact on QOL (quality of life) of patients. QOL as defined by WHO is "individual

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perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns(2). QOL includes several domains like physical ability, psychological wellbeing, social interactions, school or work performance” (3).

MATERIAL AND METHODS:

It was a descriptive hospital based study prospective study. The study population included 40 patients with diagnosis of CSOM (unilateral or bilateral) who come to ENT department in GMC&AH, Rajouri. Study tool (CES: chronic ear survey) was used after obtaining informed consent from patient. Data collected was analysed statistically using SPSS 16.

CHRONIC EAR SURVEY:

The CES score has the aim of calculating objective discomforts in patients and the effects of medical and surgical management of CSOM patients. To calculate the total score of the CES questionnaire, it is necessary to apply a definite value from 0 to 100 for every answer, with 100 being the best score. The total values obtained from each section (Activity Restriction, Symptom and Medical Resource) are then divided by then divided by the number of the questions (i.e.in the Activity Restriction and Medical Resource section the values obtained are added and divided by 3 ;in the symptom section are divided by 7). Total values for the three sections (A+S+M) are summed and then divided by 3,resulting in the final value of the questionnaire (figure 1). Joseph B. Nadol has mentioned in his study that CES is easily administered and yields in formation on total disease specific health, as well as, giving information on three sub-scores; Symptom specific, Activity restriction and medical resource(7).

Figure 1

| Activity restriction (A1+A2+A3) / 3 = A | |
|---|-------------------|
| A1 | 0-25-50-75-100 |
| A2 | 0-20-40-60-80-100 |
| A3 | 0-20-40-60-80-100 |
| Symptoms (S1+S2+S3+S4+S5+S6+S7) / 7 = S | |
| S1 | 0-20-40-60-80-100 |
| S2 | 0-20-40-60-80-100 |
| S3 | 0-20-40-60-80-100 |
| S4 | 0-25-50-75-100 |
| S5 | 0-20-40-60-80-100 |
| S6 | 0-25-50-75-100 |
| S7 | 0-20-40-60-80-100 |
| Medical resource (M1+M2+M3) / 3 = M | |
| M1 | 0-25-50-75-100 |
| M2 | 0-25-50-75-100 |
| M3 | 0-25-50-75-100 |

RESULTS:

Total number of patients in study were 40, 21 male patients and 19 female patients with age ranging from 15 to 70 years. Results are tabulated based on three sub-scores (tab2, 3, 4). About 57% of patients do not swim or shower without protecting their ears. About 22% patients have bothersome odour for them or others. About 40% patients visited physician for ear problem in past 6 months more than 6 times. Tab 5 shows total average score of 46.94 with SD 19.89

Table 1: Profile of study population (N=40)

| Variable | Categories | N | % |
|----------------|------------|----|--------|
| Age (in years) | 15-30 | 23 | 57.50% |
| | 31-50 | 11 | 27.50% |
| | 51-70 | 6 | 15% |
| Gender | Male | 21 | 52.50% |
| | Female | 19 | 47.50% |

Table 2

| Question | Response | Total | |
|---|------------------------|-------|------|
| | | N | % |
| A1. Because of your ear problem, you don't swim or shower without protecting your ear | Definitely true | 23 | 57.5 |
| | True | 5 | 12.5 |
| | Don't know | 0 | 0 |
| | False | 6 | 15.0 |
| | Definitely false | 6 | 15.0 |
| A2. At the present time, how severe a limitation is the necessity to keep water out of your ears? | Very severe | 11 | 27.5 |
| | Severe | 4 | 10.0 |
| | Moderate | 6 | 15.0 |
| | Mild | 8 | 20.0 |
| | Very mild | 7 | 17.5 |
| | None | 4 | 10.0 |
| A3. In the past 4 weeks, has your ear problem interfered with your social activities with friends, family, or groups? | All of the time | 12 | 30.0 |
| | Most of the time | 5 | 12.5 |
| | A good bit of the time | 4 | 10.0 |
| | Some of the time | 7 | 17.5 |
| | A little of the time | 7 | 17.5 |
| | None | 5 | 12.5 |

Table 2:- Activity restriction - based subscale

Table 3

| Question | Response | Total | |
|--------------------------------|-------------|-------|------|
| | | N | % |
| S1. Your hearing loss is: | Very severe | 6 | 15.0 |
| | Severe | 9 | 22.5 |
| | Moderate | 7 | 17.5 |
| | Mild | 6 | 15.0 |
| | Very mild | 8 | 20.0 |
| | None | 4 | 10.0 |
| S2. Drainage from your ear is: | Very severe | 8 | 20.0 |
| | Severe | 5 | 12.5 |
| | Moderate | 4 | 10.0 |
| | Mild | 6 | 15.0 |
| | Very mild | 3 | 7.5 |
| | None | 14 | 35.0 |
| S3. Pain from your ear is: | Very severe | 10 | 25.0 |
| | Severe | 5 | 12.5 |

| | | | |
|---|------------------------------|----|------|
| | Moderate | 4 | 10.0 |
| | Mild | 6 | 15.0 |
| | Very mild | 4 | 10.0 |
| | None | 11 | 27.5 |
| S4: Odor from your ear is very bothersome to you and? Or others: | Definitely true | 9 | 22.5 |
| | True | 7 | 17.5 |
| | Don't know | 1 | 2.5 |
| | False | 3 | 7.5 |
| | Definitely false | 20 | 50.0 |
| S5. The hearing loss in your affected ear bothers you: | All of the time | 9 | 22.5 |
| | Most of the time | 9 | 22.5 |
| | A good bit of the time | 6 | 15.0 |
| | Some of the time | 6 | 15.0 |
| | A little of the time | 6 | 15.0 |
| | None | 4 | 10.0 |
| S6. In the past 6 months, please estimate the frequency that your affected ear has drained: | Constantly | 8 | 20.0 |
| | >5 times, but not constantly | 3 | 7.5 |
| | 3-4 times | 6 | 15.0 |
| | 1-2 times | 10 | 25.0 |
| | Not at all | 13 | 32.5 |
| S7. The odor from your affected ear bothers you and/ or others: | All of the time | 3 | 7.5 |
| | Most of the time | 6 | 15.0 |
| | A good bit of the time | 5 | 12.5 |
| | Some of the time | 4 | 10.0 |
| | A little of the time | 22 | 55.0 |
| | None | 3 | 7.5 |
| Table 3-: Symptom subscale | | | |

Table 4

| Question | Response | Total | |
|---|------------------------------|-------|------|
| | | N | % |
| M1. In the past 6 months, how many separate times have you visited your physician, specifically about your ear problem? | >6 times | 16 | 40.0 |
| | >5 times, but not constantly | 2 | 5.0 |
| | 3-4 times | 6 | 15.0 |
| | 1-2 times | 13 | 32.5 |
| | Not at all | 3 | 7.5 |
| M2. In the past 6 months, how many separate times have you used oral antibiotics to treat your ear infection? | >6 times | 15 | 37.5 |
| | >5 times, but not constantly | 8 | 20.0 |
| | 3-4 times | 2 | 5.0 |
| | 1-2 times | 7 | 17.5 |
| M3. In the past 6 months, how many separate times have ear drops been necessary to treat your ear condition? | Not at all | 8 | 20.0 |
| | >6 times | 8 | 20.0 |
| | >5 times, but not constantly | 1 | 2.5 |
| | 3-4 times | 10 | 25.0 |
| | 1-2 times | 14 | 35.0 |
| | Not at all | 7 | 17.5 |
| Table 4-: Medical resource utilization subscale | | | |

Table 5: Showing characteristics of the patients according to CES questionnaire.

| Variable | Mean | Median | SD (min-max) |
|----------------------------------|---------|---------|-----------------------|
| Activity restriction-sum | 38.9555 | 33.3300 | 26.21889 (0-100) |
| Symptom-sum | 55.8391 | 55.7143 | 25.49810(0-100) |
| Medical resource utilization-sum | 46.0417 | 50.0000 | 29.71778(0-100) |
| Total- Sum | 46.9453 | 45.1183 | 19.89561 (5.24-78.33) |

DISCUSSION:

Quality of life (QOL) in CSOM patients can be measured by various tools like SF-36 (Short Form Health Survey -36), CES (Chronic Ear Survey) STAI (state trait anxiety inventory) test etc. (4). In present study we used CES as tool for measuring QOL in CSOM patients as it is reliable valid measuring tool (7). Male female ratio was more or less equal as in study by G. Ralli et al (5). Results regarding effect on various parameters of sub-scales varied from results of G Nivedha Kumari and G.Ralli (5, 6) but tot et al average score in our study (49.94) was less equal to Nadol et al study (59.6). Also in Nadols study CES data on control patients showed average score of 87.8 so there is about 42% decrease in score in CSOM patients as compared to control patients.

CONCLUSION:

CSOM has effect on QOL of patients. Further multi-centric studies are needed for confirmation of above conclusions.

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