Nonpharmacological methods in managing patients with dementia in a tertiary care hospital

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ABSTRACT

Management of dementia is very crucial. Nonpharmacological methods (NPM) are well appreciated and encouraged to be used as first-line treatment for managing elderly patients with dementia (PwD). The present case reports aimed to share the strategies of NPM for managing PwD. NPM requires a structured blueprint to record, follow-up, and monitor the outcomes. A structured proforma has been developed in the department. After getting all the basic information from the patient, needed assessments are being done by the concerned team member to identify and rate the level of severity of the problem, and specific NPM strategies are being provided. Concerted efforts give positive results; knowledge and understanding about the illness help the caregiver in managing the patient. No negative impact has been reported; NPM is a cost-effective approach and therefore should be studied on a larger level to provide evidence from India and prove its efficacy.

Key words: Multidisciplinary team, nonpharmacological methods, patients with dementia

INTRODUCTION

Dementia is one of the major health challenges of old age; its prevalence is reported to be variable in various parts of the country, and management is challenging. Thus, multidisciplinary approach is referred as the best way to treat and manage patients with dementia (PwD) and nonpharmacological methods (NPM) are well appreciated and encouraged to be used as first-line treatment for managing. The latest review reports that medications have been largely ineffective in managing troublesome behavioral symptoms and carry significant adverse effects and nonpharmacological interventions should be preceded over the utilization of pharmacological treatments.

In spite of consistent advocacy, evidence-based literature from India is hardly available as it needs resources in terms of trained humanpower as well as proper setup to implement and record, analyze, and report the cases. Being a part of a tertiary care hospital, we had an opportunity to develop a roadmap for applying NPM strategies, and a semi-structured pro forma has been prepared, which is based on the research outcome as well as experiences of the multidisciplinary team [Table 1].

Two dementia cases, where NPM was considered as the first-line treatment, are being presented here as case reports.
CASE REPORTS

Case 1
CJ, an 80-year-old female, literate (intermediate pass), married, homemaker R/o Lucknow brought to the department by her husband and daughter. Chief complaints were increased forgetfulness, irritability, suspiciousness, and abusiveness.

Patient’s cognition was severely impaired so comprehensive assessment could not be done. Only registration of 3 items could be done by her on Hindi Mental Status Examination on November 28, 2016. On Bristol Activities of Daily Living (BADL) scale, her total score was 54. She was fully dependent on caregivers.

Nonpharmacological methods strategies
Psychoeducation sessions were given to the caregivers for developing an understanding about the illness. On thorough observation, it was noticed that she may follow very simple commands, if given with a positive sensory input like patting, etc. Scheduling and modeling were suggested to improve patient’s ADL and they were also convinced to give required assistance only. Light massage, reinforcement were also suggested to release patient’s irritability. During hospital stay 30–45 min, the patient was also involved in the following activities (Peg, puzzle, and bead arm pulley) to maintain and strengthen her residual cognition [Figure 1].

Further, she also did general body exercise, self-assisted active exercise, and neuromuscular coordination exercises for physical activation.

Outcome: Assessment based
Optimistic feeling in care givers and they felt that they may handle their patient in a better way. Slight improvement in patient dependency was reported. Deceased irritability and improvement in physical mobility reduced care givers burden. After about one month stay patient get discharged.

Case 2
RS, a 71-year-old male, postgraduate (double M.A.), married and retired from teaching profession R/o Ambedkar Nagar, Uttar Pradesh, brought to the department by his son with chief complaints forgetfulness, difficulty in writing, repeated behavior admitted for comprehensive assessment.

The patient came with the complaint of progressive forgetfulness, increased repeated behavior and inability to write and identify family members with whom he was living. On the referral of his one of the neighbors, he was brought to the Geriatric Mental Health outpatient department for comprehensive assessment and remedies. He was admitted to the indoor patient department. The neuroimaging was suggestive of global brain atrophy. AIIMS neuropsychological battery was also administered for comprehensive assessment. His overall T-scores obtained on the battery were suggestive of slight damage in overall brain function (as he obtained 1.3 times higher T-scores

| Registration number: _____ | NPM proforma: _____ | Date: _____ | Patient name: _____ | Age/sex: _____ |
|---------------------------|-------------------|------------|-------------------|--------------|
| Diagnosis: _____          | Caregiver (relation): _____ |                |                  |              |
| Target symptoms (ABC)     | Current level of functioning (in terms of ABC) | Outlined interventions | Team members involved* | Expected outcome |
| Cognition                 | Behavior and psychological symptom | ADL/IADL** | Activities of Daily Living | Other: |
| Home care plan:           |                   |             |                   |              |

*1 – Dietary interventions; 2 – Occupational therapy; 3 – Physiotherapy; 4 – Psychotherapy; 5 – Psycho-education; 6 – Cognitive remediation/rehabilitation; 7 – Spiritual therapy; 8 – Art/music therapy; 9 – Care/management skill training to the care giver; 10 – Others (specify). NPM – Nonpharmacological method

Figure 1: Live examples of NPM (cognitive stimulation, recreation, physiotherapy)
than average). The BADL score was also suggestive of moderate-to-severe dementia.

Caregivers were expecting modification in writing skill, improvement in recognition ability so that he can recognize the family members and were also expecting decrease in repetitive behavior of the patient. The details are provided in table 2.

**Nonpharmacological methods strategies**

Psychoeducation to caregivers, cognitive rehabilitation to patients to maintain his residual abilities including general interventions such as scheduling, reality orientation, and modeling. Cognitive cuing and practice sessions of writing were also done. In 15 days, patients showed significant improvement.

**Outcome**

The patient was able to sustain his concentration on reading and writing tasks, he started reading paper and writing one page on regular basis. This not only reduced his repeated behavior but also improved his reading and writing ability significantly in 10 days.

During discharge of the patients, homecare plans were provided to the caregivers of the patients.

**DISCUSSION**

Both of the cases described above shows positive outcome of NPM, if given properly. In Case 1, it was observed that patting, soft voice, and small instructions significantly reduced patient’s irritability, she tried to take meal by self, she started bathing by self. Positive sensory stimulation, massage also improves sleep pattern of the patient. Studies report that massage and touch therapy have been proposed as nonpharmacological interventions to be used in dementia to balance the expressions of cognitive decline and behavioral disturbances, including related psychological problems, such as depression and anxiety, and to improve the quality of life. Massage and touch may help in reducing depression, anxiety, aggression, and other related psychological and behavioral manifestations. It is reported that expressive touch like patting or holding client’s hand involves emotional intent and helps in calming down a patient or to express concern. In validation, caregivers accepts patient’s situations, experiences as such, which often calms down patient’s irritability/agitation. Validation therapy is intended to give the individual an opportunity to resolve unfinished conflicts by encouraging and validating the expression of feelings.

Cognitive exercises with cognitive stimulations were provided to make Case 2 engaged in the task and was found to be helpful. Cognitive stimulation involves a number of pleasant tasks such as – reading, writing, gardening, cooking, solving puzzle, discussing past, involvement of family members. In the present case, after exploring patients’ interest and cognitive reservoir stencils of alphabets, Hindi scriptures, and numbers along with writing pad and pencils were given. In the first session of writing instructions were given in front of caregivers so that they may understand all of the procedures of cognitive training and rehabilitation. The outcome of the exercises was found to be very positive. This not only stimulated the patient but also helped in restructuring his writing skills and after 1 week, he started writing more than one page without the help of stencil. Similarly, orientation-reorientation also helped in improving patient’s cognitive status. It is reported that cognitive stimulation sessions which includes brain games and exercises significantly improves in measures of attention, memory, orientation, language, and general cognition.

The aim of NPM is to generate the optimum level of functioning and to maintain that till a promising duration and also to develop an understanding among the caregivers about the illness, which seems to be very simple but is a challenge. As each PwD suffer with peculiar type of problem thus, needs specific intervention. Comprehensive assessment for evaluating strength and limitations of PwDs, collective discussions, and specific strategies are helpful in managing PwD and reducing caregivers’ burden.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Table 2: Objective and Subjective Outcome of NPM

| Description | November 28, 2016 | December 08, 2016 | December 19, 2016 | Care giver’s verbatim |
|-------------|------------------|------------------|------------------|-----------------------|
| HMSE        | 3                | 3                | 6                | Optimistic feeling    |
| BADL        | 54               | 48               | 31               | Better equipped in managing patient |
| NPI         | According to caregivers presence of agitation and irritability (before admission has reduced significantly after hospitalization) | Improvement in patient independence |
|             |                  |                  |                  | Improvement in physical mobility |
|             |                  |                  |                  | Improvement in ADL and patient is feeling comfortable back |

HMSE – Hindi Mental Status Examination; BADL – Bristol ADL; NPI – Neuropsychiatric Inventory; ADL – Activities of Daily Living
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Conflicts of interest
There are no conflicts of interest.

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