Research Article

Assessment of knowledge and practice of morbidity management among lymphatic filariasis patients

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Abstract

Background: Lymphatic filariasis is an important public health problem worldwide. Global Programme to Eliminate Lymphatic Filariasis (GPELF) is based on two strategies (1) interrupt transmission and (2) morbidity management to reduce the disability.

Objective: To evaluate the knowledge and practice of morbidity management among lymphatic filariasis patients.

Materials and Methods: Community-based cross-sectional study was conducted for 2 months between May and June 2015 among 66 lymphatic filariasis patients. Structured questionnaire was used for the interview and the results were analyzed using SPSS version 20.

Result: Of the 66 patients, 39 (59%) were males and 27 (41%) were females. Mean duration of disease was 17.2 years. Majority (98.5%) of the patients had lymphedema of lower limb. Sixty three (95%) patients know about the importance of limb hygiene but only 46 (69%) patients practice it regularly. Only 6% patients check regularly for entry lesions. Though 56 patients (85%) had knowledge about limb elevation and exercise, only 33 (50%) and 14 (22%) patients practice regular limb elevation and exercise, respectively. Almost 50% patients know about the importance of wearing appropriate footwear but only 22% use if even when they are indoor.

Conclusion: It is encouraging to note that majority (95%) of the patients practice at least one method of morbidity management but still there is existence of gap between knowledge and practice of lymphedema management. Converting knowledge into practice has to be emphasized.

KEY WORDS: Knowledge, lymphatic filariasis, morbidity management, patients, practice

Introduction

Lymphatic filariasis (LF), a neglected tropical disease, is the second leading cause of chronic disability worldwide. An estimated 120 million people are infected worldwide and 1.3 billion are at risk.[1] The disease alters the lymphatic system leading to wide spectrum of clinical manifestations such as lymphedema, hydrocele, chyluria, elephantiasis, and others.[2,3] The clinical manifestations of the disease appear many years after initial infection. The chronic disability associated with LF leads not only to physical suffering, but also emotional problems, social stigmatization, and economic problems for the affected individual and socioeconomic problems for the family members.[4–6] The strategies of Global Programme to Eliminate Lymphatic Filariasis (GPELF) focus on interruption of LF parasite transmission and morbidity management to reduce the disability.[3,7] Painful acute attacks in the form of acute filarial lymphangitis (AFL) or acute dermatolymphangioadenitis (ADLA) are common among LF patients. These acute attacks occur either due to immune response to the adult worms or bacterial infections. Recurrent acute attacks cause further damage to the already affected lymph vessels leading to progression of lymphedema.[8–10] ADLA results from secondary bacterial infection and is favored by entry lesions in the skin. Hygiene and skin care are important in the management of lymphedema.[11–13] Lymphedema management focuses on limb hygiene which would prevent the secondary bacterial infections, prevention and cure of entry lesions, exercises and limb elevation to increase lymph flow, and wearing appropriate

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footwear.[14–16] Self-care by the patients plays a major role in morbidity management thereby reducing disability. Evaluating the patient's knowledge and their practice of morbidity management is important for the success of disability limitation. This study was conducted with the objectives to study the sociodemographic profile of LF patients and to assess their level of knowledge and practice regarding management of lymphedema.

Materials and Methods

This community-based cross-sectional study was conducted among 66 LF patients selected from the Filariasis Morbidity Control Clinic at Woraiyur, Tiruchirappalli. A total of 125 patients were availing the services in the clinic, of which 66 patients who were residing in Woraiyur were selected for the study. The study was carried out between May and June 2015. The study was approved by the Institute Ethics Committee. After obtaining informed consent each individual patient was interviewed in their home using a pretested, structured questionnaire. The questionnaire included sociodemographic details, knowledge and practice about limb hygiene, identification and treatment of entry lesions, limb elevation and exercise, wearing appropriate footwear, and management of acute attacks. The questionnaire was developed based on the learners guide for treatment and prevention of problems associated with Lymphatic by World Health Organization (WHO)[16] and manual on LF morbidity management by National Vector Borne Diseases Control Programme (NVBDCP).[17] The results were analyzed using Statistical Package for Social Sciences version 20. The results are presented in the form of mean and proportion.

Result

Of the 66 patients interviewed 39 (59%) were males and 27 (41%) were females. Mean age was 56.38 and 53.33 among males and females, respectively. Table 1 shows the sociodemographic details of the patients. None of them had family history of LF. The mean duration of disease was 17.2 years in the study group. Table 2 shows the clinical profile of the patients and classification of lymphedema. Lymphedema is classified according to the Fifth WHO Expert Committee on Filariasis.[16]

Knowledge about Lymphedema Management

Among the interviewed patients 63 (95%) were aware of the importance of limb hygiene. Importance of early identification and treatment of skin infections was known to 23 (35%) patients. 56 (85%) patients were aware of the importance of limb elevation and limb exercise in reducing edema. The source of information was health workers for 53 (80%) patients, doctors were the source of information for 30 (45.4%) patients, 14 (21.2%) patients gained knowledge from posters, and 10 (15%) patients received advice from the LF patients already receiving treatment from the clinic. Almost 50% (34 patients) considered wearing appropriate footwear was important.

Practice of Lymphedema Management

Sixty three (95%) patients practiced at least one morbidity management measure. Regular washing of limbs with soap and water was practiced once daily by 46 (69%) and twice daily by 4 (6%) patients. Only 4 (6%) patients regularly checked for the presence of entry lesions. Limb elevation was practiced regularly by 33 (50%) patients and all the 33 practiced limb elevation while lying. None of them practiced limb elevation while sitting or during household activities and work-related activities. Limb exercise at least once a day was practiced only by 14 (22%) patients. Footwear was used regularly by 56 (85%) patients and only 14 patients (22%) used footwear even while they were indoor. 15% (10 patients) did not use footwear either indoor or outdoor. Only 4 (6%) patients were using specially made footwear. Chart I shows the gap between knowledge and practice of lymphedema management.

Eleven (16%) patients had at least one attack of ADLA in the past 6 months. Except for one patient who had taken self–treatment, all others consulted either a health worker or medical practitioner for treatment of ADLA. Almost 50% of those who had an attack of ADLA visited a private practitioner for treatment. Cost of treatment ranged from Rs 300 to Rs 5000 for an attack with average cost of Rs 1020 per attack.

Discussion

The study results showed that the practice of morbidity management was low compared to the knowledge of the patients in all management methods. At least one morbidity management measure was practiced by 63 (95%) patients. This is similar to a study done in Orissa[18] where most of the patients practiced one or two measures. Though 95% study group knew about the importance of limb hygiene only 69% practiced it regularly. Importance of early identification of skin infections was known to 35% patients but still only 6% regularly checked for entry lesions. Limb hygiene and early identification of entry lesion have been shown as important measures in preventing ADLA attacks.[11–13] Though 50% patients practiced limb elevation, none of them practiced it during daily household activities such as cutting vegetables, watching television, chatting which would help them in reducing edema without allotting specified time in a day. Immobilization of the edematous limb in dependent position causes venous hypertension which results in further lymph stasis.[19] Proportion of patients who were practicing limb exercise (22%) was significantly high compared to a study carried out in India (2%)[18] and Sri Lanka (6%).[20] Importance of regular limb exercise in reducing lymph stasis should be emphasized in the education programs for patients. Simple joint movements either active or passive were shown to reduce edema.[21] Footwear was used regularly by 56 (85%) patients and 6% used specially made footwear. In a study conducted in Orissa,[18] 96% patients were using comfortable footwear and none of the patients used specially made footwear. This study assessed the effect of disability limitation program which is one of the strategies of GPELF.

Table 1: Sociodemographic details of the patients (*N* = 66)

Characteristics		Number (%)
Age group	31–39 years	6 (9)
	40–49 years	25 (37.9)
	50–59 years	17 (25.8)
	≥60 years	18 (27.3)
Type of family	Nuclear	48 (72.7)
	Joint	9 (13.6)
	Three generation	9 (13.6)
Housing condition	Pucca	40 (60.6)
	Semipucca	26 (39.4)
Total		66 (100)

Table 2: Clinical profile of the patients (*N* = 66)

Clinical manifestation		Number (%)
Lymphedema of lower limb		65 (98.5)
Lymphedema of upper limb		1 (1.5)
Hydrocele and lymphedema		10 (15)
Total		76*
Grades of lymphedema		
I	Pitting edema; spontaneously reversible on elevation	4 (6)
II	Non-pitting edema; not spontaneously reversible on elevation	46 (69.7)
III	Gross increase in grade II lymphoedema, with dermatoscelerosis and papillomatous lesions	16 (24.3)
Total		66 (100)
Other chronic morbidities		
Diabetes mellitus		22 (33.3)
Hypertension		18 (27.3)
No morbidity		26 (39.4)
Total		66 (100)

*Total exceeds sample size due to multiple clinical manifestations in few patients.

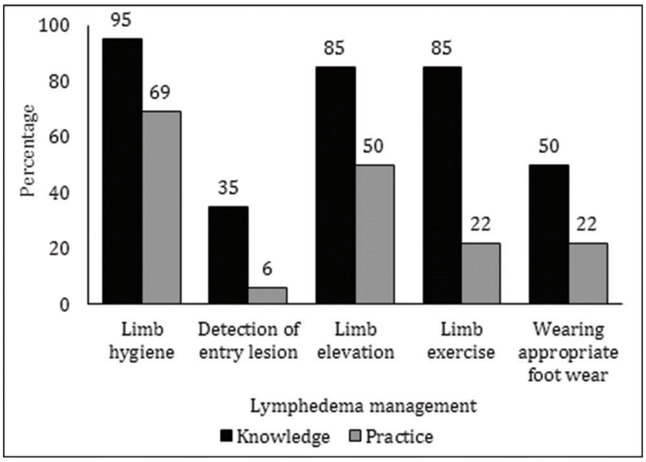

Figure 1: Knowledge and practice of morbidity management in the study group.

Since the study included a small sample of patients, the study results cannot be generalized.

Conclusion

It is encouraging to note that majority (95%) patients practice at least one method of morbidity management. But still there is existence of gap between knowledge and practice of lymphedema management. Converting knowledge in to practice has to be emphasized.

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