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Factors Influencing Proper Plantar Ulcer Care of Leprosy Patients: Experience from Mon-Ywa Township of Disabilities Survey Project, Myanmar

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Abstract: A cross-sectional study design was applied to explore types and ways of proper plantar ulcer care and factors influencing it. This study was conducted during 2008 in Mon-ywa Township because it is one of the '9 selected townships of the Disabilities survey project'. The study involved 19 patients affected by leprosy (PAL) with foot grade 2 disability, but without plantar ulcer at the time of study, 6 community members who had PAL in their immediate family and 6 community members who had PAL among their surroundings. They participated voluntarily in the study. The information was gathered by in-depth interview. Stigma attached to disability-related leprosy was still observed among the study respondents. They knew that ulcer could weaken their life and their surroundings. They were also aware of that one would gain benefit if one would free from ulcer. Personal outlook, a close attachment of their families and responsibility for the family, community's reactions and the provision from the health service were the key factors to push and pull the PAL to perform plantar ulcer care. Consequently, as to regain the normal life in a society, despite a number of difficulties, PAL tried their best to look after the plantar ulcer along with the help from their families and relatives. As they were aware of the value of ulcer-free condition. for the future, they had positive view on plantar ulcer care not only for them but also for their families.

Keywords: Proper plantar ulcer care, factors influencing, Myanmar, leprosy, disability.

INTRODUCTION

Leprosy has been regarded as the disease with fear because of deformities and disabilities; even the person was cured from the disease. Lacking in care of deformities could result in ulcers, wounds and infections and deformities. Thus, the concept of "care after cure" became important for the affected person, their surroundings and health staff to decrease stigma and live a normal person again. At the post elimination era of leprosy starting from 2003 in Myanmar, leprosy control programme (LCP) mainly emphases prevention of disability (POD) and rehabilitation [1]. Together with international organizations, a number of POD projects regarding teaching self-care methods and provision of necessary aids had been implemented [1-4]. These studies showed unfavourable results toward patients' compliance of self-care particularly plantar ulcer care. Another study also found that among patients with foot grade 2, while most had open/deep wounds, old callous with sepsis or deep and wide cracks, a few patients took care of their plantar ulcers correctly but not properly [5]. However, there is lacking in information how well and why they looked after the ulcers.

OBJECTIVE

The objective was to explore factors influencing proper plantar ulcer care of leprosy patients.

MATERIALS AND METHODS

A cross-sectional study was conducted in Mon-ywa Township, a central dry area, because it is one of the "9 selected townships of the Disabilities survey project". POD package had been implemented in Mon-ywa Township since 2003 and all basic health staff (BHS) from the township received POD training for three consecutive years. PAL with grade 1 or 2 disability were provided with micro-cellular rubber (MCR) sandals and POD kit [4].

One out of six rural health centres was chosen randomly. The study included PAL with foot grade 2 disability, but with no plantar ulcer at the time of study, community who had PAL in their immediate family and among relatives, friends and neighbours. The inclusion criteria for the PAL were adult (i.e. 18 years and above), both sexes, and foot grade 2 disability, which was already classified by the leprosy staff according to the 1988-WHO grading of disabilities [6]. Here, plantar

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ulcers meant although disease was cured, the PAL had ulcers – sores, debridement and/or open wound * caused by trauma due to lack of taking care of the feet. Due to unavailability of a list of PAL without plantar ulcer among foot grade 2, PAL were requested to look for plantar ulcer. Data collection was conducted during November 2008 using in-depth interview (IDI) with those who agreed to participate voluntarily. The number of respondents was not defined prior to study. IDIs were stopped when information were adequate for interpretation. Finally, it included 19 PALs who had no current ulcers at the time of interviewing and 12 community members who met the criteria. After getting consent, the interviews were done by trained research team using cassette recorder. Then the significant themes and sub themes were extracted for data analysis.

RESULTS

Among PAL who involved in study with no plantar ulcer, majority (89.5 %) was within 40 to 70 years and female (68.4%). Most were currently married (47.4%), had poor education level (58.9%) and they were either dependants (42.1%) or odd-job person (26.3%). Majority of PAL lived with their close families (68.4%), while about 11% each lived either with their siblings or alone. Among community members who had PAL in an immediate family, most were married, had finished lower education level and were from low social class. Most community members, who had no PAL in an immediate family, were 20 to 40 years, males, had completed their middle education level and were farm owners. Half of the community lived together with PAL. Most of them (66.7%) said their relatives, mostly uncles or aunties, were PAL. Almost all PAL said, once they were free from ulcer, they felt it was time of relief from miseries and would try.

Taking Care by those who had Never Got Plantar Ulcers

At the time of interviewing while forefeet of a few PAL were smooth and clean, majority had dried old wounds. A few PAL said they never had an ulcer though they did not prevent from getting it. Of which, a few neither knew preventive measures nor asked anybody. As a habit, they were looking for obstacles when working and/or moving around. Both PAL and community had similar out look on this. Nature of job also gave a chance to wear footwear all the time as one PAL, who was a carpenter said, *'I don't need to take off the slippers like people working on the farm. It also made me free from getting injury'.*

Taking Care by those who had Plantar Ulcers Previously

Majority had suffered from plantar ulcer previously, but at the time of interviewing, they were free from ulcers. Most knew taking rest and not working hard could avoid from additional harm to the ulcer. Some expressions were *'… it would be good if I don't need to work'*, *'… If I took a rest when having ulcer, it felt better'* or *'… the best thing was taking rest when having ulcer that could be healed in a short period*'.

A few had a strong enthusiasm for taking care of their ulcer. One middle aged female PAL, who was a bazaar cleaner had learned about foot prevention from *Ye-nant-thar* hospital (i.e. Leprosy hospital in Mandalay), looked after her feet very carefully since then. She retold her practice as:

> *On the way to bazaar, when there was a za̲ja' (wayside public rest house), I rested for a while and looked my fore feet. If they were not red I continued my walk, otherwise, I rested for a little longer. I used to stop my work at day time to avoid the heat that I could also have time to rest. Some other employees did rashly as they got injuries.*

Additionally, almost all PAL, who had suffered from ulcer, followed SSO method—soaking with water, scrubbing with a stone and oiling. The following citation illustrated the practices of most PAL.

> *Though I couldn't avoid getting ulcer, whenever I walked or worked, I used to look for obstacles not to hurt my feet. I washed cracks on my foot and applied with glycerine. I knew a little how to protect from getting ulcer but not specifically. I knew to soak and scrub with stone and then to rub with glycerine. Hsa̲ja ma (midwife) from this health centre told me to do so and it was affected for me. However, sometimes I forgot to do it because I had to work.*

Locally available footwear such as car-tyre slippers, which are cheap and durable but too hard for PAL, were mostly wore when working in the forest or when doing manual work. Most said they preferred the slippers provided by health centre (i.e. MCR) as they explained that they received it free of charge, this MCR could help them to keep away from ulcer, they could able to clamp the footwear firmly and it was very light and comfortable to wear saying *'… you would feel there were no slippers at all'.* However, some disclosed they took off the footwear at the particular situation like within the pagoda compound which is forbidden to wear, while in the house and when working on the farm and/or fishing. They also knew the avoidance of a long walk would make free of ulcer and they followed respectively. They said they mostly stayed in the house or they did not go a long trip, and only went around in the village. On the other hand, the community could not describe very well how the PAL looked after their ulcer. They only gave the unspecified responses.

Influencing Factors for Proper Plantar Ulcer Care

The respondents linked the proper ulcer care to four main factors; personal outlook, family-related, community-related and service-related factors as described below.

(i) Personal Outlook

Most thought ulcer as a natural event relating to the season. They said it started with callous and then resulted in ulcer. Different expressions inclined to the same point: the callous used to appear in winter and disappear in summer. On the other hand, most of PAL and community related the ulcer with mischievous behaviours in present life and previous existences. They believed it was due to *wu'* (cyclic process due to past misdeeds) and said '*… a person doesn't need to buy this disease [leprosy], it comes by itself*'.

(ii) Family-Related Factors

Helping the people in need—physically or verbally—seemed to be the courage and motivation for PAL. Family members and close relatives were the main actors in supporting the patient; they did daily routines of PAL, accompanied the PAL when going out, provided money and helped with the ulcer care. Attachment to each other among the close person was also one factor that PAL could have positive view on ulcer care. Getting an attention from the close family made PAL happy. Among the community respondents, they showed their appreciation by sharing food and taking responsibilities. Considering the little things was also a kind of sentiment for a PAL. One male respondent said:

> *My uncle has ulcers on his right forefoot and has shortened toes so he has difficulty in walking. I clean his ulcer with green tea but don't bandage it. He can't grip the slippers firmly, so I attach a strap to the rubber slippers. When there are flies on his ulcer, it's no good for other people to see, so I cover it with a cloth. I don't know how to prevent from getting ulcer. I help him by removing things, which can be knocked on his way or at his usual sitting places. One of our family members is always ready for him when he needs.*

The requirement to look after the family was another issue for doing ulcer care, particularly for the male PAL. The fact was that they were the head of household as they tried their best. The same view was quoted by the community. A male resident of 54 years old said as follows:

> *Though my friend's father had imputed his leg due to the severe ulcer, he is still working on the farm with the prosthetic leg. Though he can't work very well as before, he can find earning for his family*

(iii) Community-Related Factors

Neighbours and other people, as naturally, could not lend their hands as they were poor and engaged with their daily activities. They rarely helped with the daily tasks of PAL, mostly; they could only ask about their health condition and took part in their social functions. Community also showed their concerns and expressed their sympathies toward PAL in different ways.

(iv) Service-Related Factor

Provision with materials together with the explanation about health messages was another key issue in ulcer care. Most of the respondents claimed that while staff from leprosy control mainly did ulcer care during infrequent visits to their villages, midwife told the respondents about ulcer care, especially; to wear footwear always and not to do carelessly even after the ulcer was healed. However, a few admitted that they did not remember them all. The community had the same view as the PAL. Majority of PAL said they received POD kit. Though not all of them knew the purpose of the kit, they all agreed that it was benefit for PAL particularly with SSO. Some PAL, however, found inconveniences with these methods while doing their daily routines. The constraints were slightly differences among them, but constructively, they said soaking was not feasible in winter as the weather is extremely cold in winter, oiling at bed time was not applicable as the blanket and mosquito net would be dirty over with oil, bandaging all the time could make ulcer stuffy and were not feasible to work with it. For those with deformed hands, he or she had to ask someone to do it.

DISCUSSION

WHO had stated that "… personal attitudes and circumstances, combined with environmental factors can either precipitate, or help prevent disability" [7]. This was evident among the study respondents, but in the progressive direction.

In this study, the majority of PAL was people of old age indicating that large number of elderly was more prone to have foot grade 2 disability. Being the women and dependants, currently married and lived with the close family, probably; these were some factors for the PAL to have more chance of preventing their plantar ulcers. Although almost all PAL had made an effort to look after the plantar ulcer, study respondents did not use the term 'leprosy'; instead, they mentioned 'this disease' or 'when I was sick' or 'this condition'. Similarly, they expressed the deformity and disability as 'this condition'. This shows that they still have the stigma towards disability-related to leprosy.

Naturally, most looked for the obstacles whatever they did or wherever they went. To keep away from further damages to the ulcer, most were aware of the importance of doing SSO method, wearing footwear and avoiding a long walk, taking rest and not working hard when they had ulcer. Regarding the footwear, WHO had encouraged for routine use of appropriate footwear, which complies with social and cultural norms of the country [1]. However, the majority of PAL from this study much relied on the provision of MCR sandals, which need to consider for long time sustainability of empowering the PAL to depend on locally available and suitable footwear. Feenstra *et al.* (2001) also supported this issue to prohibit supplying free in implementing with the large numbers of patients [8].

However, depended on their given conditions, PAL did their best by performing suitable care for them. When examining the causes to do proper ulcer care, four main factors were discovered. Concerning personal outlook some had a strong faith that ulcer was not able to cure because of past misdeeds. Though some related ulcer to seasonal occurrence, this might be due to the geographical location of study area, which has an extreme winter. Although these personal factors seemed to be a significant issue, in real situation, these factors were intertwined with a close attachment of their families and responsibility for the family, community's reactions and the provision from the health service. These were also the key factors, which pushed and pulled the PAL to perform the plantar ulcer care. Li and his group (2008) also pointed out that together with family support, individual's power to overcome environmental barriers to positive behaviour were the significant factors that make them to adhere to self-care [9].

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