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Research Article

Prevalence of pain among female patients attending mobile medical camp in a rural block of Tamilnadu, India

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ABSTRACT

Background: Pain is a major global health problem and one of the most common problem for which people seek medical care. The musculoskeletal pains were not perceived by the health professionals as a serious health problem like other chronic non communicable diseases and pain is seen as a result of aging. The data on the prevalence of pain and musculoskeletal disorders in rural population of Tamilnadu, India is scare. The objective was to estimate the prevalence of different types of pain among female patients attending mobile medical camp in rural block in Tamilnadu, India.
Methods: A cross-sectional study was carried out among 7124 female patients who attended our weekly mobile medical camp conducted in 30 villages selected conveniently in the rural block of Kancheepuram District of Tamil Nadu in the year 2013 and analyzed for the presence or absence types and site of pain (intermittent or continuous) for 1 month or longer.
Results: Prevalence of pain was 62.8%. The prevalence of pain in <19 years was 29.5%, and 60 years and above was 73.1%. The most common pain reported was myalgia (18.3%), followed by headache (13.4%), low back pain (12.5%) and knee pain (9.3%). As the age advances the prevalence of myalgia, chest pain, knee pain, multiple joint pains also increases and it was found statistically significant. As the age advances the patients with pain symptoms also increases with 29.5% of the patients below the age 19 years to 74.5% of the patients above the age of 60 years.
Conclusions: In conclusion more than 60% of the patients attending of the medical camp complained of pain. At primary care level the physicians needs better knowledge on the management of these common pains sites especially in the rural communities when people seek medical care through camps.

Keywords: Prevalence of pain, Females, Site of pain, Rural block

INTRODUCTION

Pain is a major global health problem and one of the most common problem for which people seek medical care. Chronic pain significantly impairs the everyday activities like household and social functions, sexual relationships, lead to depression and it is so badly affects 17% percent of the chronic pain sufferers wanted to die.[1] Musculoskeletal disorders especially joint pains affect functional status and the quality of life of an individual. Female and advancing age being the important factors associated with increased incidence of musculoskeletal disorder. Studies suggest that it is more commonly reported by women and those from socially and financially disadvantage groups.[2] In India the musculoskeletal pains were not perceived by the health professionals as a serious health problem like other chronic non communicable diseases and pain is seen as a result of aging. Thus the management of these conditions was poorly understood at primary care level. The data on

the prevalence of pain and musculoskeletal disorders in rural population of Tamilnadu is scare. Earlier population based studies done in India were in the north western population of India the community oriented program from control of rheumatic diseases (COPCORD) and a global initiative of the WHO/International League of Associations from rheumatology (ILAR).[3,4] Main objective of this study was to estimate the prevalence of different types of pain among female patients attending mobile medical camp in rural block in Tamilnadu, India.

METHODS

A cross-sectional study was carried out among 7124 female patients who attended our weekly mobile medical camp conducted in 30 villages selected conveniently in the rural block of Kancheepuram District of Tamil Nadu in the year 2013. All female patients who had attended our medical camp were included in the study and analyzed for the presence or absence of all types of pain (intermittent or continuous) for 1 month or longer. All patients with acute, chronic and intermittent pain were included in the study. Pain includes musculoskeletal pain like low back pain, shoulder pain, neck pain, and osteoarthritis pains such as knee pain and hip pain, etc. Other pains include pain in the lower and upper limb, abdominal pain, pain in eyes, ear and throat and headache. Patients with pain associated with trauma or injury were excluded from the study. The study was approved by the Institutional Ethics Committee. Data were entered on microsoft excel spread sheet and analyzed using standard statistical software packages. Descriptive data were presented as measures of simple proportions and Chi-square test was used for analysis of categorical variables.

RESULTS

Prevalence of pain at one or more joints among 7124 females attended the mobile medical camp was 62.8%. the prevalence of pain in <19 years was 29.5%, in 20-39 age group was 67.9%, in 40-59age group was 74.5% and >60 years was 73.1%.

Table 1 depicts the reported symptoms of pain among female patients attending the free mobile medical camp. The most common pain reported was myalgia (18.3%), followed by headache (13.4%), low back pain (12.5%) and knee pain (9.3%). In the age group of less than 19 years higher prevalence of were reported for headache (25.2%), low back pain (24.3%), abdominal pain (21.3.%), ear pain (2%) and tooth pain (1.8%) compared to other age groups. In the age groups of 20-39 years back pain (5.6%), tooth pain (5.5%) and neck pain (2.5%) were more prevalent compared to other age group. More number of patients in the group of 40-59 reported upper and lower limb pain (12.2%), leg pain (7.6%), shoulder pain (7.2%) and epigastric pain (5.8%) compared to other age group. In the age group of above 60 years higher prevalence were noted for myalgia (32.3%), knee pain (15.4%) and multiple joint pains (7.5%) compared to other age groups.

Table 1: Prevalence of pain among rural females seeking medical care through medical camps.

Symptoms	<19 N=1494 (20.9)	20-39 N=2197 (30.8)	40-59 N=2290 (32.1)	>60 1143 (15.9)	Total N=7124	χ^2 , df and P value
Myalgia	21 (2.5)	362 (16.5)	554 (24.2)	369 (32.3)	1307 (18.3)	χ^2 =492, df=3, p=0.000
Headache	192 (25.2)	412 (18.8)	268 (11.7)	67 (5.9)	936 (13.4)	χ^2 =118,df=3 p=0.000
Low back pain	183 (24.3)	392 (17.8)	254 (11.1)	64 (5.6)	893(12.5)	χ^2 =111,df=3,p=0.000
Knee pain	11 (1.0)	130 (5.9)	348 (15.2)	176(15.4)	665 (9.3)	χ^2 =303,df=3,p=0.000
Both upper and lower limb pain	22 (1.5)	209 (9.5)	281 (12.3)	95 (8.5)	607(8.5)	χ^2 =163,df=3,p=0.000
Abdominal pain	205 (21.3)	311 (14.2)	281 (10.6	113(9.8)	909 (12.7)	χ^2 =14,df=3,p=0.003
Ankle and foot pain	20 (1.7)	159 (7.3)	179 (7.8)	81 (7.1)	439 (6.2)	X^2 =77.0,df=3,p=0.000
Multiple Joint pain	8 (0.6)	89 (4.1)	166 (7.2)	86 (7.5)	349 (4.9)	χ^2 =108,df=3 p=0.000
Shoulder pain	1 (0.5)	91 (4.1)	165 (7.2)	60 (5.2)	326 (4.6)	χ^2 =111, df=3,p=0.000
Back pain	13 (1.2)	122 (5.6)	121(5.3)	58 (5.1)	314 (4.4)	χ^2 = 56.6,df=3,p=0.000
Throat Pain	36 (3.2)	120 (5.5)	80 (3.5)	16 (1.4)	255 (3.6)	χ^2 =44.7,df=3,p=0.000
Neck pain	2 (0.3)	55 (2.5)	58 (2.5)	14 (1.2)	129 (1.8)	χ^2 =38.5,df=3,p=0.000
Chest pain	7 (0.7)	35 (1.6)	36 (1.6)	16 (1.4)	94 (1.3)	χ^2 =16.7,df=3, p=0.013
Tooth pain	26 (1.8)	25 (1.1)	14 (0.6)	8 (0.7)	73 (1.02)	χ^2 =12.9, df=3,p=0.005
Ear pain	32(2.0)	18(0.8)	14 (0.6)	8 (0.7)	72 (1.01)	χ^2 =24.8, df=3,p=0.000
Eye pain	8 (0.9)	22(1.0)	26 (1.2)	10 (0.9)	66 (0.9)	χ^2 =3.54,df=3 p=0.316
Hip pain	1(0.1)	17(0.8)	38 (1.7)	21(1.8)	76 (1.1)	χ^2 =29.6 df=3,p=0.000

As the age advances the prevalence of myalgia, chest pain, knee pain, multiple joint pains also increases and it was found statistically significant. In case of headache, general abdominal pain, low back pain the prevalence decreases as the age advances and it was found statistically significant. Much difference was not noted in the prevalence of ear pain, chest pain, leg pain and back pain above the age of 20 years.

Table 2 shows the proportion of patients with number of sites of pain. As the age advances the patients with pain symptoms also increases with 29.5% of the patients below the age 19 years to 74.5% of the patients above the age of 60 years. The number of sites of pain also increased as the age increases.

Table 2: Frequency of pain sites reported by the female patient attending mobile medical camp.

Number of sites of pain	<19 N=1494 (20.9)	20-39 N=2197 (30.8)	40-59 N=2290 (32.1)	>60 1143 (15.9)	Total N= 7124
No pain	1054 (70.5)	705 (32.1)	584 (25.5)	308 (26.9)	2651 (37.2)
Pain in one site	409 (27.4)	1199 (54.6)	1287 (56.2)	628 (54.9)	3520 (49.4)
Pain in 2 site	29 (1.9)	277 (12.6)	363 (15.9)	188 (16.4)	857 (12.1)
Pain in 3 or more sites	2 (0.1)	16 (0.7)	56 (2.4)	19 (1.7)	93 (1.3)

DISCUSSION

About 60% of the female patients attending the mobile medical camp complained of pain. A similar finding was reported by Bjorn girdle et al with a prevalence of 62.3%.[5] Logaraj et al reported a prevalence of 45.5% among female above the age of 40 attending mobile medical camp.[6] Bratberg G et al had reported prevalence of obvious pain was 50% among females.[7] Johannes CB et al and Haq SA et al reported prevalence of pain 30.7% and 31.3% among US female adults and in female rural communities in Bangladesh respectively.[8,9]

In the present study the most common type of pain were myalgia, followed by headache, low back pain and knee pain. Logaraj et al reported the main site of pain was in the order of knee pain, low back pain, multiple joint pain and leg pain.[6] The multi-centre WHO study reported back pain, headache and joint pain as three most common anatomical sites of pain among those with persistent pain.[10] several other studies have reported knee pain, low back pain and shoulder pain as the common sites of pain. Haq SA et al, Minaur N et al, Dai SM et al , Chopra et al, Sharma R et al.[9,11-14]

In the present study as the age advances the prevalence of pain also increases from 29.5% in the age group of <19 years to 73.15% in above age of 60 years. Similar finding was reported by S Parsonsa et al as age advances the prevalence of pain increases from 23% to 50 percent from 18-24 age group to 55-64 age group.[15] Similar finding was reported by Michelle Urwin with the prevalence of pain in each area increased with age up to the age of 65 and then tended to plateau.[16]

In the present study age trend was noticed with increasing prevalence as the age advances for myalgia, knee pain, hip pain and multiple joint pains. No trend existed for other joint pain. Prevalence tends to decrease as the age advances for headache, low back pain and general abdominal pain. Parsonsa S et al reported except for upper back, neck and chest pain for all other pain age trend existed.[15]

Myalgia (muscle pain)

In the present study myalgia is the most common pain experienced by the female patients attending the mobile medical camp with a prevalence of 18.3%. In a study done in Delhi urban area showed a prevalence of 7.56%, Dibrugarh rural area showed a prevalence of 11.1% and Jodhpur showed a prevalence of 4.35 percent.[14] In this study as the age advances the prevalence of muscle pain also increases and it was found statistically significant. Similar findings of prevalence of muscle pain increasing with age were reported at study done all centers of Delhi, Dibrugarh and Jodhpur.[14] Musculoskeletal health in Europe survey 2007 showed 37% of the female population had long term muscle problem.[17]

Headache

In the present study headache being the second most common type of pain with prevalence of 13.5 percent. Similar finding was reported by Parsonsa S et al and Birse TM et al with headache as the second most type with prevalence of 15% and 16% respectively.[15,18] Slightly higher prevalence headache was reported by Bjorn girdle et al and Von Korff, Michael et al with 21.8% and 26% among females respectively.[5,19] In the present study the highest prevalence was notice in the age group of less than 19 years. Sara King et al in the systematic review reported head ache (8-83%) as the most common type of pain in children and adolescent. [20]

Low back pain

In the present study the prevalence of low back pain was 12.5% among the female patients. Similar finding was reported by Chopra A et al with a prevalence of 15.4% among rural women population in Maharashtra.[3] In contrast higher prevalence (36.6%) was reported by Bjorn girdle among the females.[5] Among patients with low back pain the prevalence was highest (24.3%) for <19 years compared to other age group. In contrast Bjorck-vanower C et al back pain was most prevalent in the 45-64 year of age group.[21] In the present study the prevalence of low back pain decreases as the age increases and it was found statistically significant.

Knee pain

In the present study the nearly one tenth of the female patients had knee pain. A similar finding was reported by J.C. Fernandez-Lopez et al with 10.2 percent.[22] Slightly higher prevalence was reported Chopra A et al among women (15.7%) in the rural population of Maharashtra.[3] In contrast higher prevalence was reported by Logaraj et al with 19.7% and Parsonsa S et al with 17% prevalence.[6,15] In the present study the prevalence of knee pain increases as age advances from 1% in the age group of <19 years to 15.4% in the age above 60 years. Similar findings of increasing prevalence as the age advances were reported by Parsonsa et al and Michelle Urwin et al.[15,16]

Abdominal pain

In the present study the prevalence of abdominal pain was 12.7 percent. Similar finding was reported by Sally Bridge et al with 12 % prevalence among women.[23] in contrast lower prevalence of abdominal pain was reported by Björn Gerdle, with 6.1% prevalence. [5] In the present study high prevalence (21.3%) of generalized abdominal pain was reported among the age group of <19 years. Slightly lower prevalence was reported by Korterink JJ et al with 15.9% of the young girls with Functional abdominal pain disorders.[24] Sara king systematic review revealed with a range of 4-53% of girls had abdominal pain.[20]

In the present study as the age advances the prevalence of generalized abdominal pain decreases and it was found statistically significant.

Multiple joint pains

In the present study 4.9% of the women complained of multiple joint pains. Similar finding was reported by Logaraj et al with 5.6% of the women complained of multiple joint pains. [6] As the age advances the prevalence of multiple joint pains also increases and it was found statistically significant.

Limb pain

In the present study the prevalence of limb pain (lower and upper limb) was 8.5% among women seeking medical care. Highest prevalence was noticed in the age group of40-59. Bihari V, et al reported in his study as 6.6% of the female participants reported limb pain.[25]

Hip pain

In the present study the prevalence of hip was 1.1% and the prevalence of hip pain increases as the age advances and it was found statistically significant. Similar finding was reported by Chopra A et al with a prevalence of 1.1% among women among rural population in Maharashtra. Study done in Dibrugarh reported a higher prevalence of 6.6% with hip pain.[3] Thiem U et al reported prevalence of 5.5% hip pain among adults over the age of 40 years.[26]

Back pain

In the present study the prevalence of back pain was 4.4%. Higher prevalence of back pain was reported among Delhi, Dibrugarh and Jodhpur ranging from 31.53% to 36.9 percent.[3] Català E et al reported a prevalence of 21.5% among the Spanish population.[27] Von Korff, Michael reported my higher prevalecne of back pain with 41%.[19]

Ankle and foot pain

In the present study the prevalence of ankle and foot pain was 6.2% with no much variation in above the age of 19 years. Higher prevalence of ankle pain (20.2%) was reported among Dibrugarh Center.[3] Parsonsa S et al had reported a prevalence of ankle/foot pain as 25% and it increases as the age increases.[15]

Neck pain

In the present study the prevalence of neck pain was 1.8% .similar finding was reported by Joshi VL et al with prevalence of 1.9% among the urban population of pune in India.[4] In contrast higher prevalence was noticed in the age group between 20-59 years and then the prevalence decreases and very low prevalence was noticed in less than 19 years age group. Similar findings was reported by Parsonsa S et al reported with neck pain was most prevalent in the 45- to 64-year-age groups.[15] A higher prevalence of neck pain (6.8%) was reported by Joshi et al among the rural population in India and Sally Bridge et al reported higher percentage of women (25%) said they experience neck pain.[4,23]

Shoulder pain

In the present study the prevalence of shoulder pain was 4.6%. Higher prevalence was noticed in the age group between 40 to 59 years compared to other age group. Similar finding was reported among in the Europe

survey with 4.4% complained that they had shoulder pain in the past 3 months prior to survey.[17] Logaraj et al reported 2.2 percent of the women reported shoulder pain.[6] In contrast Parsonsa S et al reported et al higher prevalence of 17% shoulder pain and Arvin Chopra et alreported 10.1% among rural women population in Maharashtra.[3,15]

Nearly One and less than one percent of the females complained of tooth pain, ear pain, eye pain and lower abdominal pain and chest pain with not much of variations in the prevalence across the age groups. A similar finding of less than one percent was reported by Logaraj at al.[6]

In the present study as the age advances the patients pain symptoms increases with one third of patients below the age 19 years had pain symptoms to one two third of the patients above the age of 60 years had pain symptoms. The number of sites of pain also increases as the age increases. similar finding was reported by Urwin M et al pain symptoms among women increased from 35% in the age group of 16-44 to 63% in the above the age of 75 Years.[16] In our study nearly half of the patients had pain in one site and 1.3% had pain more than one sites it was similar findings of Urwin M et al with 34% reported pain in one site and one percent of subjects had pain in all eight locations.[16] In contrast Birse TM et al had reported 78% of the patients had pain between one and three sites and rest of them had pain in more than three sites.[18]

CONCLUSION

In conclusion more than 60% of the patients attending of the medical camp complained of pain thus it should be recognized one of the major public health problem. The common types of pain include headache, myalgia, knee pain and low back pain. At primary care level the physicians needs better knowledge on the management of these common pains sites especially in the rural communities when people seek medical care through camps. Thus capacity development of the doctors who are treating at primary care level on management of pain is the need of the hour.

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