

STUDY OF INCIDENCES OF NON SPECIFIC ULCER OF FOOT AND LEG IN AND AROUND KULASEKARAM

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ABSTRACT

AIM

The objective of present study in to know the incidences of non-Specific Ulcer of foot & Leg in and around Kulasekaram of rural population of Kanyakumari District.

PLACE OF STUDY

This study was done in inpatient department of surgery of Sree Mookambika Institute of Medical Sciences. Kulasekaram.

PERIOD OF STUDY

A one year survey was done from 02-10-2014 to 01-10-2015.

MATERIALS AND METHODS

This study was done on Eighty-six patients admitted in Department of Surgery, at Sree Mookambika Institute of Medical Sciences, Kulasekaram Out of eighty-six, males were seventy-three, and 13 were females were thirteen between the age groups of 30 to 86 years. Each patients with nonspecific ulcer was examined thoroughly with proper detailed past history, personal history, family history, systemic history & history of similar complaint in the family.

OBSERVATIONS

Regarding personal habit & systemic disease, twenty five were smokers and forty eight were diabetics. Another interesting factor is seventy eight people were using coconut oil for all food preparation. Incidences of non-specific Ulcers were more in elderly age group above the age of 61 years.

CONCLUSION

It has been observed that incidences of nonspecific ulcers were more in patients who were using coconut oil for all food preparations. Hence coconut oil might have caused above nonspecific ulcers. Hence it has been studied and reported.

TAKE HOME MESSAGE

Awareness of nonspecific ulcers by using coconut oil has to be given. If it is caused by using the coconut oil then it should be avoided.

KEYWORDS

Ulcers, Varicosity of Vein, Specific ulcers, Nonspecific ulcers, Malignant ulcers, Morphological Death.

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INTRODUCTION: Ulcer can be defined as a break or discontinuity in the surface epithelium of skin or mucous membrane due to morphological death of tissues.

- A) Clinically Ulcer is classified into Healing Ulcer, Spreading Ulcer and Chronic Ulcer.
- B) Pathologically Ulcer is classified into Specific Ulcer, Non Specific Ulcer and Malignant Ulcer.

Specific and malignant occurs due to specific aetiology, needs specific treatment. In nonspecific Ulcer, etiology of Varicose Ulcer is excluded. Here this study is made to quote a reason for other nonspecific Ulcers that is coconut oil may be precipitating factor or etiological factor.

MATERIALS AND METHODS: Eighty-six patients admitted in Department of Surgery, of Sree Mookambika Institute of

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Medical Sciences, Kulasekaram of rural population of Kanyakumari District constituted the materials for the present study. Out of them seventy-three were males, and thirteen were females between the age groups of 30 to 86 years. Each patient with nonspecific ulcer was examined with proper detail past history, personal history, family history, systemic history & any history of similar complaint in the family were also noted.

INVESTIGATIONS:

1. Venous Doppler showed incompetence of Sephanofemoral Junction or perforators in 17 patients. They were excluded for study.
2. Only 53 patients were willing for arterial Doppler. Among them 50 patients had atherosclerosis of large & medium sized arteries.
3. Routine investigation done for haemogram and lipid profile.

Surgery department: Month of October 2014 to September 2015

Sl. No	Date	Sex (M/F)	Age	Complaints
1	02-10-2014	Male	40	Ulcer-Right foot
2	03-10-2014	Male	30	Ulcer-Right leg
3	05-10-2014	Male	46	Ulcer-Left Foot
4	08-10-2014	Male	70	Ulcer-Right leg
5	14-10-2014	Female	43	ulcer-Right-Leg
6	18-10-2014	Female	46	Ulcer-Right foot
7	26-10-2014	Male	65	Ulcer-Right foot
8		Male	69	Ulcer-Left foot
9	29-10-2014	Male	39	Ulcer-Left foot
10		Male	80	Ulcer-Left leg
11	30-10-2014	Male	56	Ulcer-Left leg
12		Male	74	Ulcer-Right leg

Table 1: Month of October 2014

Total: 12 cases.

Sl. No.	Date	Sex (M/F)	Age	Complaints
1	03-11-2014	Female	64	Ulcer-Right leg
2	06-11-2014	Male	68	Ulcer-Right foot
3	09-11-2014	Male	60	Ulcer-Left foot
4	14-11-2014	Female	46	Ulcer Right foot
5	18-11-2014	Male	49	Ulcer-Right foot
6		Male	44	Chronic Ulcer-Right Foot
7	24-11-2014	Male	39	Ulcer-Left Foot
8		Female	46	Chronic Ulcer-Right foot
9	30-11-2014	Male	72	Ulcer-Right leg
10		Female	45	Ulcer-Left Foot

Table 2: Month of November 2014

Total: 10 cases.

Sl. No.	Date	Sex (M/F)	Age	Complaints
1	02-12-2014	Male	78	Ulcer-Right leg
2	05-12-2014	Female	36	Ulcer-Right leg
3	08-12-2014	Male	84	Ulcer-Right foot
4	10-12-2014	Male	69	Ulcer-Right foot

Table 3: Month of December 2014

Total: 4 Cases.

Sl. No.	Date	Sex (M/F)	Age	Complaints
1	02-01-2015	Male	68	Ulcer-Left foot
2		Male	62	ulcer-Right foot
3		Male	74	Ulcer-Right foot
4	07-01-2015	Male	56	Cellulitis-Right leg
5	21-01-2015	Female	33	Ulcer-Left leg

Table 4: Month of January 2015

Total: 5 cases.

Sl. No.	Date	Sex (M/F)	Age	Complaints
1	03-02-2015	Female	38	Ulcer-Left leg
2		Male	30	Ulcer-Right leg
3	08-02-2015	Male	40	Ulcer-Right Foot
4	12-02-2015	Female	19	Chronic ulcer-Right leg
5	16-02-2015	Male	70	Ulcer-Left Foot
6	19-02-2015	Male	78	Ulcer-Left leg
7	23-02-2015	Male	45	Chronic Ulcer-Right leg

Table 5: Month of February 2015

Total: 7 cases.

Sl. No.	Date	Sex (M/F)	Age	Complaints
1	02-03-2015	Male	63	Chronic (Ulcer Left)leg
2	08-03-2015	Male	62	Ulcer chronic-Left leg
3	13-03-2015	Male	54	Ulcer-Right Foot
4	28-03-2015	Male	72	Chronic ulcer-Right leg

Table 6: Month of March 2015

Total: 4 cases.

Sl. No	Date	Sex (M/F)	Age	Complaints
1	01-04-2015	Male	69	Chronic Ulcer-Right leg
2		Male	45	Chronic Ulcer-Left leg
3	08-04-2015	Male	30	Chronic ulcer-Right leg
4		Male	59	Chronic ulcer-Right leg
5	16-04-2015	Male	50	ulcer-Left foot
6	23-04-2015	Male	51	Chronic Ulcer-Right leg
7	26-04-2015	Male	77	Chronic ulcer-Right leg
8		Male	65	Ulcer-Right leg
9	29-04-2015	Male	29	Chronic Ulcer-Right leg
10		Male	50	Ulcer-Left leg

Table 7: Month of April 2015

Total: 10 cases.

Sl. No	Date	Sex (M/F)	Age	Complaints
1	02-05-2015	Male	51	Chronic ulcer-Right foot
2	05-05-2015	Male	41	Chronic Ulcer-Right foot
3	13-05-2015	Male	55	Chronic Ulcer-Right Foot
4	19-05-2015	Male	64	Chronic ulcer-Left-Foot
5	20-05-2015	Male	69	Ulcer -Right foot
6	21-05-2015	Male	23	Ulcer- Left foot
7		Male	70	Ulcer-Left foot
8	23-05-2015	Male	44	Ulcer -Left foot
9	27-05-2015	Male	33	Ulcer -Left foot
10	29-05-2015	Male	46	Ulcer-Left foot
11	31-05-2015	Male	85	Ulcer-Right leg
Table 8: Month of May 2015				

Total: 11 cases.

Sl. No	Date	Sex (M/F)	Age	Complaints
1	01-06-2015	Male	61	Ulcer-Right foot
2		Male	86	Ulcer-Left Foot
3	05-06-2015	Male	62	Ulcer-Left Foot
4	07-06-2015	Male	37	(Left) Ulcer-Left foot
5	15-06-2015	Male	40	Chronic Ulcer-Right foot
6		Male	49	Ulcer-Right foot
7	25-06-2015	Male	65	Ulcer-Left Foot
Table 9: Month of June 2015				

Total: 7 cases.

Sl. No	Date	Sex (M/F)	Age	Complaints
1	01-07-2015	Male	61	Ulcer-Left Foot
2	03-07-2015	Male	50	Dorsum of foot-Right leg
3	08-07-2015	Male	65	Ulcer-Left leg
4		Male	50	Ulcer-Right foot
5	09-07-2015	Male	61	Cellulitis-Right leg
6		Male	57	Ulcer-Left leg
7		Female	30	Cellulitis-Right leg
8	15-07-2015	Male	60	Ulcer -Right leg
Table 10: Month of July 2015				

Total: 8 cases.

Sl. No.	Date	Sex (M/F)	Age	Complaints
1	10-08-2015	Male	73	Ulcer-Left foot
2	16-08-2015	Male	61	Ulcer-Right foot
3	21-08-2015	Male	53	Ulcer-Right Foot
Table 11: Month of August 2015				

Total: 3 cases.

Sl. No.	Date	Sex (M/F)	Age	Complaints
1	03-09-2015	Male	53	Ulcer-Left leg
2	05-09-2015	Female	60	Ulcer-Right leg
3	07-09-2015	Male	40	Ulcer-Right Foot
4	09-09-2015	Male	60	Ulcer-Left foot
5	11-09-2015	Male	38	Ulcer-Left Foot
6		Male	48	Ulcer-Left leg
7	14-09-2015	Male	60	Ulcer-Left leg
8	01-10-2015	Female	53	Ulcer-Left foot
Table 12: Month of September 2015				

Total: 8 cases.

OBSERVATION: This study was done on eighty six patients. Out of them seventy three [84.88%] were males and thirteen [15.11%] were females. There were forty eight people with diabetic and smokers were twenty five. Ulcers were seen in 44.18% on the left side, 55.81% on the right side. Ulcers over the leg were observed in 36cases [41.85%] and ulcers were seen over the foot in 48 of cases [55.81%]. There were only two cases [2.32%] of cellulitis. Fifty patients had atherosclerosis of large & medium sized arteries. High LDL & Triglyceride were observed in 72[83.72%] patients. Nonspecific Ulcers of foot and leg were observed between age groups 30 -86 years and more in elderly age group after the age of 61 years. Median age was 65 years.

In the present study: Incidence of ulcers over the Right Foot were 24(27.90%); over the Left foot were 24(27.90%); over Right leg is 26(30.23%); and over Left leg were 16(18.60%).



LEGEND 1-CHRONIC ULCER OVER MEDIAL ASPECT OF RIGHT LEG



DISCUSSION: Atheroma is the common cause of Arterial stenosis and occlusion. It can occur all of sudden due to emboli or trauma. Stenosis or occlusion produces signs and symptoms to the organs supplied by the arteries. For example, intermittent claudication, rest pain and gangrene occurs in the lower limb, transient ischemic attacks occurs in the brain, hypertension and renal failure occurs in the kidney. It is the size of the artery that is related to severity of symptoms. In the chronic cases of arterial stenosis, there will be collateral circulation. [Bailey and love]¹

ARTERIAL ULCER: These ulcers are rare when compared to venous ulcers. Arterial ulcers are due to poor circulation or peripheral arterial disease. These ulcer are commonly seen in elderly patients and may be due to trauma or infection. They are punched out ulcers destroying the deep

fascia There will be intermittent claudication with discoloration of one or more toes. [Das. S]²

The leg and foot ulcers are the chronic wounds which are slow break down of epidermal or non-epidermal tissue on the foot leg below the knee. They may go for non-healing also their prevalence rate is very high. These ulcers need more nursing time and dressings are costly which is burdensome to the patient. For foot and leg ulcers, there is new wound management that is Keera boot specially designed for foot and leg ulcers which is boot shaped dressing which completely covers the ulcer. This boot gives relief to the pain, easy to use & saves nursing time. When the patient is intolerant to compression therapy this keeraboot is recommended to treat diabetic foot ulcers and venous ulcers of foot. [Ashton JJ]³

Andersson E et al⁴ investigated patients with leg and foot ulcer from the Medical records. They found in 1377 patients, the mean age for men was 70 years and for women was 76 years. Women were mostly affected in 61%. Frequency for both leg and foot ulcers patient were same between men and women, in 30 % of patents, ulcer were present on their feet only. 1:1 was the ratio between men and women for feet ulcers in men incidences of ulcers was earlier than women. Ulcers were present on the medial side of the calf only in seventeen percent of all patients a rough estimate was made for the prevalence of leg and foot ulcers which was between 0.2-0.4% [Andersson E]⁴

In 1980 vascular disorders were investigated which the caused leg and foot ulcers. Prevalence rate was 0.3%. Seventy three years was median age of all patients. Sixty percent were women Prevalent rate rapidly increases with the age, more after 70 years. There was small difference in the number of leg and foot ulcers between men and women. Patients with leg and foot ulcers were treated as out patients in seventy six percent the mortality rate for the leg and foot ulcer patients were twice in both men and women during the follow-up period when compared to same age in the population of Göteborg, during the same years. [Hansson C].⁵

A demographic survey of leg and foot ulcer patients in a defined population was done by Lindholm C et al⁶ in Malmö, including primary care, homes for the elderly, and industrial health clinics. Leg and foot ulcers were identified in 275 patients. Response rate was high (88% total, Primary Care: 100%), the prevalence of 0.12%. Leg and foot ulcers were treated in Primary Care in 50%. Leg ulcer patients were treated at the Department of Dermatology in 30%. Leg and foot ulcer patients were over 75 years of age were seen in 88%. Median age was 79.5 years, with 80 for women and 76.5 for men. In Primary Care the median age was 82. In the study population overall sex ratio of was 3:1 [Lindholm C et al].⁶

The improvement of wound-associated pain and healing trajectory with a comprehensive foot and leg ulcer care model was conducted by Woo KY¹, Sibbald RG.⁷ They studied in total of 111 subjects with chronic leg and foot ulcers which were recruited from the community and ambulatory wound care clinics in four weeks. They

demonstrated improvement in overall wound healing in 111 subjects with chronic leg and foot ulcers. Using an 11-point numerical rating scale, the average level of pain was reduced from 6.3 at week 0 to 2.8 at week 4 ($P < .001$). The average healing rate was 0.39 cm per week and the average relative reduction in size was 59.36% ($t=2.31$; $P=.023$). In healed subjects the mean pain score was 1.67 where as in those who did not achieve complete wound closure mean pain score was 3.21 ($P < .041$). [Woo KY and Sibbald RG].⁷

PRESENT STUDY: All the cases of ulcers were identified in inpatients Department of Surgery at Sree Mookambika Institute of Medical Sciences, Kulasekaram and not from any Primary health center. There was no history of trauma nor infection. They were punched out ulcers destroying the deep fascia Incidences of ulcers in both feet were 49.58% whereas incidences of ulcers over the both legs were 48.83%. Men were affected more in 84.88% and females were affected in 15.11%. The ratio of both leg and foot ulcers patient were almost 1:1. Location of ulcers were varying more commonly on the medial side These nonspecific Ulcers of foot and leg were observed between age groups 30-86 and more in elderly age group after the age of 61 years. Fifty patients had atherosclerosis involving large & medium sized arteries. High LDL & Triglyceride were found in seventy two patients.

CONCLUSION: Ulcers of foot and leg are common conditions that are affecting foot and leg in Diabetic patients and patients suffering from varicose veins of Lower limbs. The reasons lying behind is end arteritis in diabetics and in varicose veins due to accumulation of degraded metabolic products in foot and lower aspect of leg. Beyond this, something else was striking in our mind in this area that is the usage of coconut oil which is found to be the cause for vascular insufficiency. Hence this made us interesting to study these cases of nonspecific ulcers.

TAKE HOME MESSAGE: Awareness of nonspecific ulcers by using coconut oil should be given. If it is caused by using the coconut oil then it has to be avoided.

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