

TITLE: A COMPARISON OF PATIENTS WITH DIABETES MELLITUS HAND AND FOOT SYNDROMES

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BACKGROUND:

Diabetes mellitus (DM) is characterized by development of chronic complications including diabetes mellitus foot syndrome (DMFS) and diabetes hand syndrome (DHS). Diabetic foot ulcers are extensively characterized in Nigeria but information on DHS appears limited.

OBJECTIVE:

To present and compare the features of patients with DHS versus those with DMFS and to raise awareness about DHS.

METHODS

The ward admission charts of patients with DHS and DMFS were reviewed for twelve months from February 1st 2017 to January 1st 2018. The data obtained from records of each patient included age, sex, type and duration of DM, mode of presentation, and outcome of hospitalization. The risk factors that were considered included family history of diabetes mellitus, history of smoking, presence or absence of peripheral neuropathy and peripheral vascular disease.

RESULTS

Table 1 shows the comparison of the features of DHS and DMFS. It shows that people with DHS had more dry gangrene and people with DMFS had more wet gangrene. There were more people with co-existing hypertension in DMFS. None of the people with DHS had co-existing hypertension., Both had poor glycaemic control.

Table 1. Characteristics of Patients				
	DMFS	DHS	X²	P value
Number(M/F)	31(13/18)	7(3/4)	0.002	0.964
Age [(mean(SD)]	55.9 ± 10.96	54.3 ± 18.71	34.673	0.119
years				
Male				
Female	58.3 ± 9.43	64.5 ± 11.90		
	53.9 ± 11.99	40.7 ± 18.72		
% Good glycaemic control	15.4	0.0	0.179	0.672
Hypertension [N(%)]	16(51.6)	0.0	6.240	0.012
HbA1C (mean)	10.6 ± 2.73	11.4 ± 2.55	1.009	0.315
Smoking [N(%)]	4(12.9)	0(0.0)	1.009	0.315
Peripheral Neuropathy[N(%)]	14(87.5)	2(12.5)	0.645	0.422
Peripheral vascular				

Disease[N(%)]	17(70.8)	7(29.2)	5.005	0.025
Type of gangrene				
Wet[N(%)]	12(38.7)	2(28.6)	14.556	
Dry[N(%)]	1(3.2)	4(57.1)		0.001
None[N(%)]	12(38.7)	1(14.3)		
*Mode of treatment				
Spontaneous[N(%)]				
Trauma [N(%)]	20(64.5)	3(42.9)	1.121	0.290
	11(35.5)	4(57.1)		
Part of limb affected				
Right[N(%)]	7(22.6)	5(71.4)	6.550	0.038
Left[N(%)]	19(61.3)	2(28.6)		
Both[N(%)]	5(16.1)	0(0.0)		
Duration of Diagnosis				
Short [N(%)]	14(51.9)	1(50)	0.003	0.960
Long [N(%)]	13(48.1)	1(50)		
Mode of treatment				
Surgical[N(%)]				
Medical [N(%)]	15(48.4)	4(57.1)	0.546	0.761

Mixed[N(%)]	14(45.2) 17	3(42.9) 4(57.1)		
Hospitalization duration (weeks)	4.58	3.80	7.432	0.385
Cost of management (\$)	2366	2552		

P value ≤ 0.05 was statistically significant, DM- diabetes mellitus, Duration of diagnosis of

DM: Short- ≤5years; Long- >5years DMFS- diabetes mellitus foot syndrome, DHS- diabetes mellitus hand syndrome.



Figure 1. DHS involving the left middle finger of a 33-year-old woman who was pricked by the uropod of a crayfish when cooking which was managed by debridement and dressing alone.



Figure2: Showing the dorsum of the right hand of a 62-year-old woman who was pricked

by a fish bone when cooking, had ray amputation of the middle finger



Figure3: Showing the right leg of a 54-year-old man who developed spontaneous blisters and subsequently had a below knee amputation

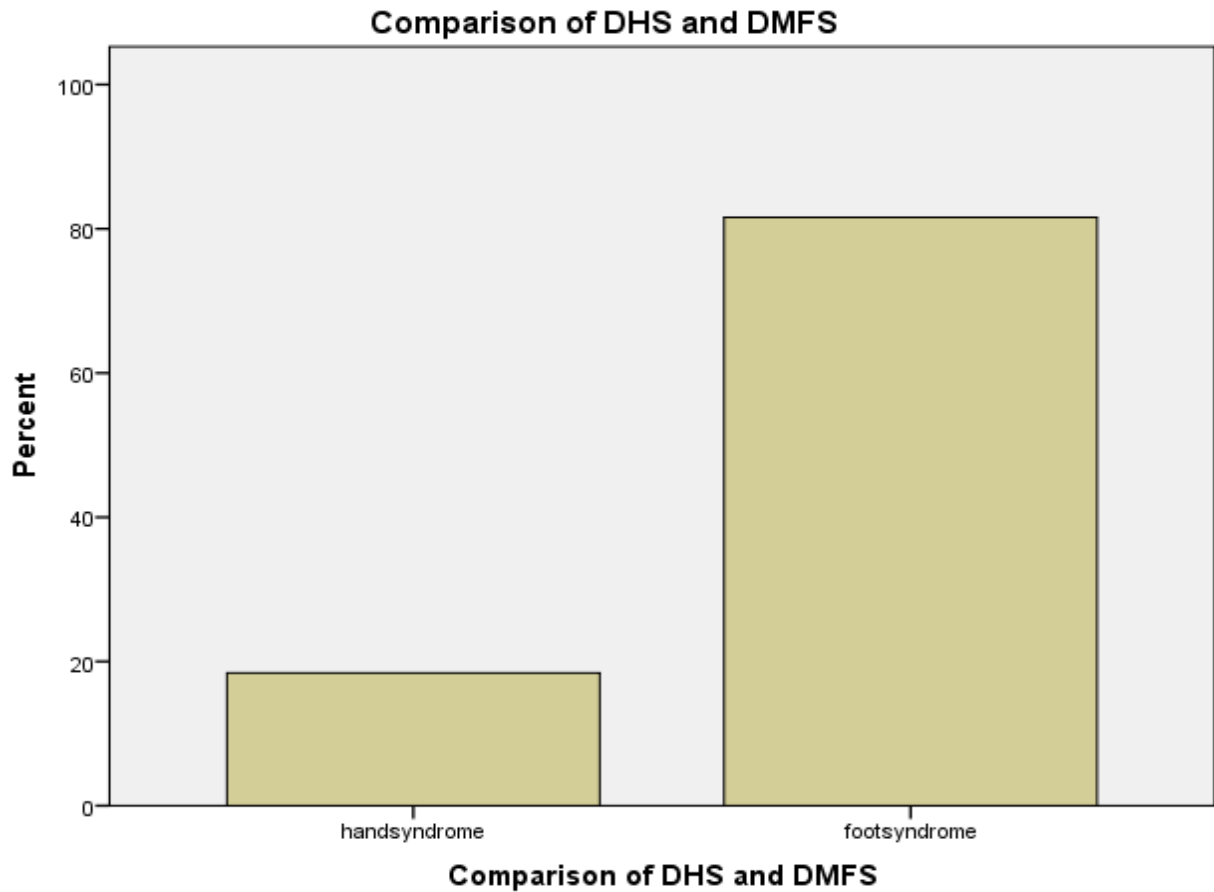


Figure 4: A comparison of DHS and DMFS

DISCUSSION/CONCLUSION

- The middle and index fingers of the right hand is mostly affected in DHS while the left foot is more affected in DMFS.
- DHS is often preceded by trivial injuries (e.g. fish bone, crayfish uropod) while DMFS is mostly preceded by spontaneous blisters.
- The most common risk factor seen in all DHS is poor glycaemic control while peripheral vascular disease is more common in DMFS.

- Both appear to affect mostly women but more so in women following trivial injuries from kitchen mishaps and this may be due to the fact that majority of the women with DHS were housewives.

RECOMMENDATIONS

- Focus on patient education
- Ensure good glycaemic control
- Ensure early presentation

CONFLICT OF INTEREST:

We declare no conflict of interest.

KEYWORDS:

Diabetes mellitus; diabetes mellitus hand syndrome; tropical diabetes hand syndrome; fish bone, Crayfish uropod, outcome