Prevalence of Fibromyalgia Syndrome in Patients with Haemophilia A

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ABSTRACT:

BACKGROUND:

Fibromyalgia syndrome is a common rheumatological syndrome with multiple systemic manifestations which could occur alone or associated with many diseases.

OBJECTIVE:

To detect the possible relation between fibromyalgia and haemophilia-A patients.

PATIENTS AND METHODS:

One hundred patients with haemophilia-a were studied and compared with another hundred, healthy individuals matched for age and sex, serving as control group. Full history was taken and complete clinical examination was done for all individuals in both groups.

The american college of rheumatology 1990 criteria for fibromyalgia were applied for both groups. They were questioned about presence of chronic widespread pain, sleep disturbance, headache fatigue and parasthesia . Detection of at least 11 of 18 tender points by digital palpation of specific soft tissue sites were needed for diagnosis of fibromyalgia.

RESULTS:

There was a significant increase in the frequency of fibromyalgia among individuals with haemophilia-a (25%) compared to healthy control group (3%) (p=0.000004, odd ratio=0.093, 95% confidence interval 0.027-0.319).

CONCLUSION:

Fibromyalgia occurs with high frequency in hemophilia A patients.

KEY WORDS: fibromyalgia, haemophilia-a

INTRODUCTION:

Fibromyalgia syndrome (fms) is a chronic non-inflammatory and non-autoimmune painful musculoskeletal disorder composed of core features that are always present (wide spread pain and characteristic tender points present on physical examination)[1,2].

These tender points count has been referred to as sedimentation rate for distress[3,4].

Although a precise cause remains unidentified, a disturbance in stage 4 sleep has been observed in patients with fms with knowledge that growth hormone secretion peaks during stage 4 sleep[5,6].

The exact cause of fibromyalgia is still not well understood but mechanisms which have been suggested include abnormal pain perception, sleep disturbance, abnormal circulating levels of central neurochemical substances, and skeletal muscles abnormalities (structural or functional)[7].

The american college of rheumatology 1990 criteria for classification of fms were applied for diagnosis[8].

Haemophilia is a hereditary disorder include haemophilia a and haemophilia b and both are virtually identical in clinical finding and considered the most serious congenital coagulation factor deficiencies[9].

The hall-mark of haemophilia is the haemoarthrosis. bleeding into the joint may be induced by minor trauma. many haemoarthrosis are spontaneous[9].

haemophilia a (factor viii deficiency) is an x-linked recessive disease, and as a rule only males are affected, females may also become affected if they are the offspring of a haemophiliac father and carrier mother[10].Essential diagnosis of hemophilia –a include: x-linked recessive pattern of inheritance with only males affected, low factor viii coagulant (viii: c) activity, normal factor viii antigen, and spontaneous haemoarthrosis [10].

Fibromyalgia is commonly associated with many chronic diseases and because hemophilia-a is one

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of chronic diseases, a possible association with fms might be present.

the aim of the study is to assess the possible relation between fibromyalgia and haemophilia a.

PATIENTS AND METHODS:

A cross-sectional study was carried out at the pediatric teaching hospital / haemophilia ward from december 2007 till june 2008. one hundred male patients had haemophilia-a. our patients were diagnosed in the pediatric teaching hospital based on family history, clinical history, clinical examination, and laboratory investigation. another hundred individuals without haemophilia disease (healthy males) matched for age and sex were collected from relatives and accompanying persons of patients attending the pediatric teaching hospital and to rheumatology unit, were studied serving as a control group. full history was taken and complete clinical examination was done for all individuals in both groups.

The american college of rheumatology 1990 classification criteria[8]for fibromyalgia were applied to all hemophilic a patients and non haemophilic, healthy individuals included in the study. individuals in both groups were inquired about the presence of chronic wide spread pain in left and right sides of the body, above and below the waist and axial skeleton for at least three months duration. they were examined for the presence of local tender points necessary for diagnosis of fms. Patients with other haemophilias, than haemophilia-a and those showed positive test for hepatitis c were excluded from the study.

A signed consent was taken from all individuals studied. ethical approval was obtained from the ethics committee of baghdad university, college of medicine, medical department.

statistical analysis:

statistical analysis was done using statistical package for social science software (spss14). association between different categorical variables measured by using chi-square test, or fisher's exact test where appropriate. Difference between continuous variables was measured using t-test. p-values<0.05 were considered significant.

RESULTS:

The demographic characteristics of 100 male patients with hemophilia –a were compared with 100 healthy male individuals (control group) are shown in table 1. the mean age was 17.05±8.14 years for the hemophilia –a patients group, and 17.32±7.77 years for the control group (p=0.811).

The frequency of fms in 100 patients with haemophilia-a was 25% compared to 3% in 100 healthy individuals (p-value = 0.000004, odd ratio=0.093, 95% confidence interval 0.027-0.319) as shown in table 2.

The frequency of fibromyalgia symptoms were highly statistically significant in patients compared to control group (p<0.05) as shown in table 3.

Risk factors for occurrence of fibromyalgia in hemophilia a patients were shown in table 4.

Table1: Demographic characteristics of 100 patients with hemophilia A and 100 controls

Variables	Patients n=100	Controls N=100	P-value
Mean age (years)	17.05±8.14	17.32±7.77	0.811 ^{ns}
Gender Male n.(%)	100(100)	100(100)	ND

n., number; %, Percentile; ns,P-value is not significant; ND, not done.

Table2: Frequency of FMS in 100 patients with hemophilia A and 100 controls

Group	FMS Present n. (%)	Absent n. (%)	P-value	Odd ratio	95%CI
Patients n=100	25(25)	75(75)	0.000004*	0.093	0.027-0.319
Controls n=100	3(3)	97(97)			

* P-value is significant. ; FMS, fibromyalgia syndrome; CI, confidence interval; n, number; %, percentile

Table3: Frequency of fibromyalgia symptoms in hemophilia A patients and controls

Symptoms	Patients n=100	Controls n=100	P-value
Wide spread pain n(%)	25(25)	3(3)	0.00001*
Headache n.(%)	24(96)	1(4)	0.0000002*
Fatigue n(%)	31(96.9	1(3.1)	0. 000000001*
Paraesthesia n.(%)	20(95.2)	1(4.8)	0.00000402*
Sleep disturbances (%)	21(91.3)	2(8.7)	0.0000125*

* P-value is significant; n., number; %, percentile.

Table 4: Risk factors for occurrence of fibromyalgia in hemophilia A patients

Risk factors	FMS Present bsent	P-value	Odd ratio	95%CI
Age n.(years)	25(16.92±8.63 75(17.09±8.03)	0.927	-	-3.92-3.58
Duration n.(years)	25(17.72± 9.98) 75(17.02±8.06)	0.754	-	-3.78-4.62
FHX of Rheumatic diseases n (%)	22(71) 9(29)	0.000000000004*	0.019	0.005-0.075
Marital status Married n(%) Unmarried n(%)	1(11.1) 8(88.9) 24(26.4) 67(73.6)	0.288	0.349	0.04-2.93
Severity Mild n(%) Moderate n(%) Severe n(%)	11(14.5) 65(85.5) 4(28.6) 10(71.4)10(100) 0(0	0.00000003*	-	-

* P-value is significant; FMS, Fibromyalgia syndrome; N, number; CI, confidence interval; %, percentile.

DISCUSSION:

In the present study we found a significant association between fms and haemophilia-a which is a new clinical observation up to the best of our knowledge.

The frequency of fibromyalgia symptoms (wide spread pain, headache, fatigue, parasthesia, and sleep disturbances) were significantly more in haemophilia-a patients compared to controls.

Despite the recognition of fms by world health organization (who) in 1992[5] it remains a controversial condition, because the diagnosis, assessment of follow up of the syndrome still relies solely "on self reported syndrome", commonly pain and tenderness is subjective reflecting many factors like, ethnicity, age, sex, social back ground, underlying concomitant chronic disease and psychological stress [11].

This is also true regarding management, there is no specific treatment for fms[12], management will encompass multiple strategies, including education, stress management and aerobic exercise to help the patients cope with their symptoms and improve their quality of life [13,14].

In the present study, the prevalence of fms in patients with haemophilia-a is common finding compared to controls. this agreed with naomi schlesinger study[15] done for sickle cell disease patients and pamuk ge et al study [16] done for iron deficiency anemia and thalassemia minor patients.

many conditions reported to be commonly associated with fms like systemic lupus erythematosus[17], sjögren's syndrome[18], and rheumatoid arthritis [19].

The high frequency of fms in our patients may stem from sleep disturbances, severity of the disease, haemoarthrosis, and family history of rheumatic diseases.

A number of limitations of the current study must be pointed out. we did not perform a detailed assessment of depression, anxiety, or coping among patients who developed tenderness and other symptoms of fms. more detailed analyses of these parameters would better characterize these aspects and would assist in the evaluation of the association between depression, a significant confounding risk factor in hemophilia a and the development of fms symptoms. lastly, the relatively small size of the study sample must be noted.

Large prospective randomized controlled trials of patients with stable chronic hemophilia are needed to further evaluate whether fms is more prevalent in hemophilia a compared to age, race, and sex matched patients with anemia. insight into the pathogenesis of fms may be gained by better understanding the causes of fibromyalgia in hemophilia.

We recommend to follow and assess patients with hemophilia for fibromyalgia to get better rehabilitation and management.

CONCLUSION:

Fibromyalgia occurs with high frequency in hemophilia a patients.

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