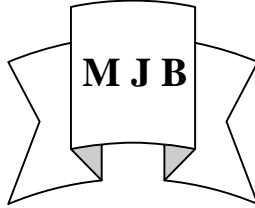


Breast Feeding and Juvenial Rheumatoid Athritis

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Abstract

Objective to find history of breast feeding in patient with juvenile rheumatoid arthritis and compare with general population and the effect on the coarse of disease and type of the treatment

43 patients with different type of juvenile rheumatoid arthritis had been survey as case control study and compare with general healthy population regarding the breast feed history and the duration of it and the effect on the coarse of the illness and the type of treatment and compare with 100 persons as control group with same age group during period of tow years with fallow up.35 Of patients were breast fed of different duration81.4%, while the control group breast fed was 87%, the risk of uveitis and need to admission to hospital and combination therapy more in the non breast fed patients than the breast fed patients, and poor response to the therapy and poor attendance to school, The need for breast fed was important for the prevention and decrease the risk of autoimmune disease including juvenile arthritis and for delay the development of the disease and improving the response to the therapy .

الخلاصة

هذه الدراسة المقارنة أجريت لمعرفة نسبة الرضاعة الطبيعية عند مرضى التهاب المفاصل الرثوي الطفولي ومقارنتهم مع الأشخاص الأصحاء، تم فحص ومتابعة 43 مريض مصابين بانواع مرض التهاب المفاصل الرثوي الطفولي خلال مدة سنتين في شعبة المفاصل في مستشفى مرجان التعليمي في بابل ومقارنتهم مع 100 من الأشخاص الأصحاء من نفس الفئة العمرية و خلال هذه الفترة تمت متابعة المرضى ومدى الاستجابة الى العلاج وقد كانت النتائج، أن 35 مريضا 81.4% حصلوا على الرضاعة الطبيعية لفترات مختلفة في حين كانت نسبة الرضاعة الطبيعية عند الأصحاء 87%، لقد كانت الاستجابة للعلاج عند المرضى الحاصلين على الرضاعة الطبيعية جيدة بينما نسبة احتياج المرضى الذين لم يحصلوا عليها أكثر في ناحية الاحتياج إلى العلاجات الغير تقليدية

ان ظهور المرض تأخر عند الفئة التي حصلت على الرضاعة وكذلك الاحتياج إلى دخول إلى المستشفى وكانت نسبة الإصابة بالتهاب القزحية المصاحب للمرض اقل عند المرضى الحاصلين على الرضاعة الطبيعية .

ان الرضاعة الطبيعية مهمة جدا في الوقاية من الأمراض المناعية ومن هذه الأمراض مرض التهاب المفاصل الرثوي الطفولي وكذلك أنها مهمة من أنها تقلل المضاعفات المصاحبة للمرض عند المرضى الحاصلين عليها وتسرع في الاستجابة إلى العلاج ولهذا ننصح بالاستمرار في تشجيع النساء على الرضاعة الطبيعية وشرح الفائدة للعوائل التي لديها طفل مصاب بمرض المفاصل الرثوي الطفولي

Introduction

The breast feeding is the feeding of an infant or young child from woman's breast [1]

Experimental evidence suggest that with few exceptions , human breast milk is the best source for nutrition of human infant [2]

Expert still disagree about how long breast feeding should continue to gain the most benefit [3]

The exact properties of breast milk are not entirely understood but nutrients of the mature milk is relatively stable, its ingredients come from the food supply and

if its not enough nutrients come from body mothers stores , its exact compositions varies from day to day , even hour to hour depend on its consumption ,mother food and the environment [4]

Breast feeding has benefit for both mother and the child physically and psychological ,nutrients and antibodies are passed to the baby while hormones are released into mother body [5]

The health benefit of the breast feeding are well documented

Extensive researches especially in recent years ,documents diverse and compelling advantages to infants ,mother ,families and society from breast feeding these include health ,nutritional , immunological ,developmental and environmental benefits [6]

Breast milk feeding is associated with low risk of the following disease

Diabetes ,crohns disease ,celiac disease ,asthma , autoimmune thyroid

Disease ,eczema, multiple sclerosis ,rheumatoid arthritis and other [7]

Breast milk has several anti infectious factors and IgA which protect from microbial infections

International guidelines recommended that all infants be breast fed exclusively for the first six months[8]

Juvenile rheumatoid arthritis [JRA] is disease classified as systemic ,pauciarticular,or polyarticular disease according to onset within the first six months

As general juvenile rheumatoid arthritis [JRA] disease onset either insidious or abrupt .the child may had a school history of absence ,limping may observed in individuals with more sever juvenile arthritis ,weight loss without diarrhea may observed in individuals with active disease ,some time associated with anorexia ,photophobia may observed in patients with uveitis [9] .

According to the classification of American college of rheumatology [ACR],the disease has three subtypes:

First the systemic onset JRA may accompanied by effervescent rash which typically linear ,affecting trunk and extremities ,arthritis may not occur for months following onset making the diagnosis difficult [10] .

Second the pauci articular disease which is characterized by arthritis affecting four or fewer joints typically large joints ,example knee ,ankle wrist ,monarticular involve the hip is highly unusual .

Chronic involvement may result in atrophy of the extensor muscles of the thigh .

Third is the polyarticular type which affect at least five joints may be large or small joints ,often bilateral distribution with sever

limitation of movement and decrease in the physical function [11] .

To provide criteria for diagnosis ,detailed physical examination is critical tool in the diagnosis juvenile arthritis and to detect abnormalities that suggest other diagnosis Labe studies help in the diagnosis of the of the juvenile rheumatoid arthritis and monitoring of disease and its treatment they include erythrocyte sedimentation rate ,differential count of white and PCV and platlate count ,liver enzyme ,urine analysis and anti nuclear antibody which observed in 25% of juvenile arthritis specially in pauciarticular type ,titer of 1:80 or higher are positive ,when found in young girls ,its marker of increased risk of uevitis and its very high will suggest systemic lupus and have no relation to disease activity .the rheumatoid factor rare with systemic type and it found its marker of persistence of poly articular type into adulthood

The other test include total serum protein ,imaging studies like X-ray ,bone scan and MRI and echocardiography and dual energy radiography absropometry scan .finally arthrocentesis and synovial biopsy.

Aim of the study:

To find out if children with juvenile rheumatoid arthritis are less likely to had breast feeding during infancy than normal children , and to find out the effect of breast feeding of the disease course and treatment of the disease

Patients and methods:

Case control study has been done during 2006-2007 in Merjan teaching hospital ,43 patients with JRA of different types have been included in this study and compared with 100 normal subjects from the same age group ,full history from the patients and or the family about breast feeding and the duration of it and also the time of the development of arthritis for patients whom were already diagnosed to had juvenile arthritis ,the diagnosis of all patients the new and old patients has been made according to the American college of rheumatology criteria of diagnosis of juvenile arthritis ,Full examination of patients ,and investigation that available or can be done out side hospital like complete blood picture ,ANA factor, latex antibody ,liver function test

,renal function and urine analysis,and full family history was taken about other connective tissue disorder ,school attendance ,hospitalization ,response to the therapy ,the social state of the family and if the child was full term or not ,also previous eye examination was reviewed and the patient was sent for another eye examination at least for once during the study done by ophthalmologist for eye involvement specially uveitis ,The patients were followed at least for nine months with period of three month interval between .

The control group consist from 100 normal subjects taken from school and college at same mean age of the patients group, they were examined to exclude any illness and asked about the history of breast feeding and the duration of it.

The patient who has any illness that associated with arthritis were excluded from the study like psoriasis or leukemia or rheumatic fever and spondyloarthritis.

Result

The total number of group [1] of patients with JRA were [43] patients and control group [2] were [100] person table [1], Patients group consists from 29 female [67.5 %] and 14 male [23.5%],control group consist from 50 male and 50 female, table [2] .

The age of patients group was range between 2-23 years with mean age [12.5years].and control group range age between 5-25 years with mean age [13 years]

Table [3].

The classification of patients according to ACR criteria were 26 patients with poly articular type 60.2% ,13 pauciarticular type 32.4% and 4 patients with stills 8.4% disease table [4].

During the examination of patients with follow up period we found [4] patients to had uveitis 8.4%,three were female ,one was male ,two of them were pauciarticular type and two were poly articular type ,three of them were ANF positive ,2 pauci type and one poly type,table[5].

Also we found 7 patients positive for antinuclear antibody,5 of them were pauciarticular type and the two other were poly articular type and still disease,for latex

test we found 8 patients were positive 6 polyarticular type ,one still disease and the other pauciarticular type,table[6].

The living area of those patients were 24 in rural area and 19 in urban area, table [7].

For vaccination 36 were full vaccination and 7 were partially vaccinated ,table[8].

For the breast fed we found 35 were breast fed with different duration and 8 were not breast fed at all ,table[9].

From them only 11 were breast fed for less than one year,20 were breast fed between 1 to 2 years and only 4 more than two years, table[10].

School attendance were regular in 22 patients, irregular in 10 patients where 11 had no school at all 3 were preschool age, table[11].

Family history of autoimmune disease were positive 8 patients, table[12].

The response to therapy in 24 patients were good ,all were breast fed, 13 moderate response 10 were breast fed, other 3 were no breast fed and the other 6 patients were poor response to the treatment that available were non breast fed, table[13].

From all patients [43] ,6 patients were preterm and other were full term, table[14].

Social state was good in 11 patients ,mid class in 13 patients and low in 19 patients, table[15].

For patients need methotrexate therapy the number were 34 patients all the non breast fed, three patients need further management with other immunosuppressive therapy,table [16].

The admission to hospital had occur for only six patients only ,3 of them were had poly articular disease 2 of them were non breast fed ,the other three were two still disease one was breast fed the other non, and pauci type and non breast fed. table[17].

During this study only 2 patients have other associated illness, one thalassemia and the other was hypothyroidism.

The control group were consist from 100 normal subjects their mean age was [5-25]years. They consist from student from different school and college,

The number of breast fed children were [87] 87%.

Discussion

The diagnosis of juvenile rheumatoid arthritis is based on physical finding of arthritis [synovitis] in at least one joint that persist for at least [6] weeks with other cause being excluded with onset when the individual is younger than [16] years. The hips and small joints of the spine when affected by synovitis do not demonstrate swelling but demonstrate the combination of the loss of motion and pain .[9]

Definite diagnosis of the systemic onset type JRA must await the eventual development of arthritis which may takes months to occur Other physical finding that may occur with JRA are, ocular; photophobia in uveitis which usually asymptomatic and found by examination and Synechia may be found on routine examination .

Other systemic involvement include cardiac involvement like percarditis or myocarditis and it occur in systemic onset type, or lymph node enlargement or hepatomegaly.[11]

The spondyloarthropathy is chronic disease characterized by period of inflammation of tendons and ligaments ,particularly at area of inserstion into bone [entheses] ,the child and adolescent with spondyloarthropathy present with arthritis making distinction from JRA difficult ,further more some children occasionally develop a disease that appear to be combination of the tow diseases ,although enthesitis can be observed in person with puciarticular arthritis and polyarticular arthritis ,the eventual evolution of arthritis to a predominant enthesitis is more characteristic of spondyloarthropathy , the presence of HLA 27 helpful in suggesting diagnosis ,however radiographic changes observed in adults [sclerosis of sacroiliac spine joints,bambospine are rare in childhood and adolescence [10] .

The study tries to find out if breast feeding has protective on the development of juvenile rheumatoid arthritis and to find if it affect the course of the disease ,in the last study of the UNDP in Iraq in 2004 found breast feeding in Iraq was 85% in the first year and it decrease to 39% after 2years age [12] ,in our control group we found 87% of them were breast fed in the first year of life the difference was because our control in one province ,

The juvenile arthritis is chronic disease affect not only the child but also family of the child , breast feeding also protect mother by 20% reduction in risk of the development of rheumatoid arthritis if she had breast fed her child for 12 to 23 months [13]

Other study done in the united state in 1995 found odds ratio for children with juvenile arthritis to get breast feeding was 0.04[0.20-0.81,95 CI].

Most of those patients were pauci articular type. In that study the prevalence of arthritis was decreased with increased the duration of the breast fed.[14]

In Iraq the breast fed is standered as type of infant feeding specially in rural area but we find that 56.7% of patients were from rural area and most of our patients were polyarticular type 60.2%, while the pauciarticular type were 32.4% of total number of patients .

All patients were they no breast fed were in need of more aggressive treatment than those patients with breast fed, the admission to hospital was more for poly articular type. About half of patients were from low social class where more dependence on the breast feeding,

We found the breast feeding alone was a major role in prevention or the development of juvenile arthritis but still it can delay the development of it and decrease the severity of illness and the need of more aggressive therapy .

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Table 1:

groups	patients	Control
number	43	100

Table 2:

Patients	Males 14 [32.5%]	Females 29[67.5%]
control	Males 50[50%]	Females 50[50%]

Table 3:

patients	2 - 23 years	Mean 12.5 years
Control	5- 25 years	Mean 13 years

Table 4:

Patients disease	Number of patients
polyarticular	26 patients [60.2%]
Pauciarticular	13 patients [32.4%]
Stills disease	4 patients [8.4%]

Table 5:

Patients & uveitis [4]8.4%	Sex	Antinuclear
Poly [1] paucitype[2]	Female 3 75%	2 positive
Polyarticular type	Male 1 25%	It positive

Table 6:

Type & number of patients	Antinuclear antibody [7] patients [16.5%]	Latex antibody [8] patients [18.5%]
polyarticular	[1] patient	[6] patients
pauciarticular	[5] patients	[1] patient
Stills disease	[1] patient	[1] patient

Table 7:

Urban area patients	Rural area patients
[19] patients 44.3%	[24] patients 56.7%

Table 8

Totally vaccination	Partially vaccination
[36] patients 85.6%	[7] patients 14.4%

Table 9:

Breast fed	Not breast fed
[35] patients 81.2%	[8] patients 18.8%

Table 10:

	Number of patients	Duration of breast fed
[11] patients		Less than [1] year
[20] patients		Between [1-2] years
[4] patients		More than [2]years

Table 11:

Number of patients	School attendance
[22] patients 51.2%	Regular
[10] patients 23.4%	Irregular
[11] patients 3 of them preschool age 26.4%	No school attendance

Table 12:

No family history of autoimmune	Family history of autoimmune
[35] patients 81.4%	[8] patients 8.6%

Table 13:

Good respond to therapy [24] patients 55.8%	All were breast fed
Moderate respond to therapy [13] patients 32.2%	[10] patients were breast fed, [3] patients were non breast fed
Poor respond to therapy [6] patients 12%	[6] patients ,5were non breast fed

Table 14:

Preterm delivery patients	Full term delivery patients
[6] patients 13.5%	[37] patients 76.5%

Table 15:

Good social state patients	[11] patients 20.8%
Mid social state patients	[13] patients 30%
Low social state patients	[19]patients 49.2%

Table 16:

Patients need methotrxate therapy	[34] patients including all the non breast
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	fed
Patients need other immunosuppressive therapy	[3] patients ,one of them was no breast fed

Table 17:

Admission of patients to hospital	Number of patients and breast fed
Poly articular disease	[3] patients [2] were non breast fed
Stills disease	[2] patients [1] was non breast fed
Pauci articular disease	[1] patient and was non breast fed