Clinico-epeidemiological study of Malta fever (undulant fever) in Baquba city

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الخلاصة

دراسة سريرية وبائية لمرض الحمى المتموجة (مالطا) في مدينة بعقوبة.

أجريت هذه الدراسة في مدينة بعقوبة للفترة من بداية شهر شباط إلى نهاية شهر تشرين الأول ٢٠٠٥ وكانت (٤٢٠) حالة مرضية .

تبين أن نسبة انتشار المرض تزداد في الأشهر(نيسان ، مايس ، حزيران ، تموز ، آب) أكثر من بقية الأشهر الأخرى.

كان عدد الذكور ١٧٢ (٤١%) أما الإناث فكانت ٢٤٨ (٥٩%) .

كانت الأعراض السريرية الشائعة هي ارتفاع   درجة الحرارة (٩٢%) والتعرق (٧٦%) وآلام الظهر والمفاصل (٦٧%) أكثر من بقية الأعراض السريرية الأخرى كالصدا واضطراب المعدة وتضخم الطحال والكبد.

الإصابات كانت أكثر بين الكبار منه بين صغار السن والأطفال ، إضافة إلى زيادة الإصابات بين الفلاحين والقصابين ٥٣ (١٢%) وكذلك ربات البيوت ١٧٤ (٤١٫٥%) أكثر من بقية شرائح المجتمع الأخرى.

نسبة الإصابات في الأرياف كانت (٦٠%) أكثر منه لدى سكان المدينة (٤٠%) ، أما الإصابات بين الذين أعطوا إيجابية لتناول الحليب ومشتقاته فكانت (٨٨%).

Abstatact:

The study was conducted in Baquba hospitals from first of February during October of the year 2005, 420 patients were collected, this study showed tat the disease was more prevalent during the months(April, May, June, July & August). The infected males were 172 (41%) while the infected female were 248 (59%) and the disease is more prevalent among adults than children.

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The commonest clinical features was fever (92%), sweating and rigor (76%), backache and joint pain(67%) were more than other signs and symptoms as headache, nausea and vomiting and hepato spleenomegaly.

The farmers and butchers whom were infected 53(12%), the house wives174(41%) more than other groups.

The prevalence of the disease was more in rural area (60%) than in urban area (60%). The history of milk and milk products ingestion among patients was 88%.

Introduction:

Brucellosis is an important public health problem in many developing countries, the disease is found globally, bur it is more common in Mediterranean area including Iraq and Arabian peninsula (1,2), and it is one of the most important zoonoses infections of animals which affect human (3), the disease is attributed to Brucella abortus, Brucella melitensis, Brucella suis and Brucelaa canis are the most common organism (4).

The mode of transmission from animal to animal were mainly sexual, animal to human transmission through skin abrasion, mucous membrane of mouth and conjunctiva or by inhalation and this is more common in some occupations, also in milk and milk products consumers(4).

The clinical manifestation do vary, the classic triad of fever, arthralgia, arthritis and hepatosplenomegaly can be demonstrated in most patients, other associated symptoms include headache, night sweats, weakness and fatigue(4).

The diagnosis depend on clinical features and presence of positive serological and or agglutination test, rose Bengal test as a rapid sensitive and specific test for brucellosis(2)

Methodology:

The cases were collected from the out patients clinic in Baquba general hospital and Al-Batol hospital in Baquba city, from the fist of

February during October of the year 2005, 420 patients were collected, all these cases were clinically examined and the diagnosis was made by signs and symptoms with positive rose Bengal test(serum agglutination test) done in the laboratory of the hospitals.

Direct questionnaires were arranged including (name, age, sex, residency, history of ingestion of milk or milk products, occupation which includes farmers and butchers, house wives, children and others which include other jobs as teacher, students and business)

Results:

Month distribution

It was shown that the infection was more during April 41, may 80, June 32, July 33 and August 54 but it was less during February, march and October, see table (1).

Age:

The disease was more distributed among group age 20 to 60 years and less among children and elderly (8 patients below 9 years and 2 above 70 years age), see table (2).

Clinical state:

The signs and symptoms were fever 92%, sweating and rigor 76%, headache 63%, joint pain and backache 67%, neusea and vomiting 28% and hepatosplenomegaly 18%, see table(3).

Gender:

Females were more infected 248(59%) and the males were 172(41%), see table(4).

Occupation and residency :

Farmers and butchers were 53(12.5%) and house-wives 174(41.5%), see table(5).

The disease was more among rural area 246(60%) while in urban area was 174(40%), see table (6).

Ingestion of milk and milk products:

The history of ingestion of milk and milk products among the diseased persons was 370(88%) while those with no history was 50 (12%), see table(7).

Table (1) the distribution of the patients with Malta fever according to the months of the year.

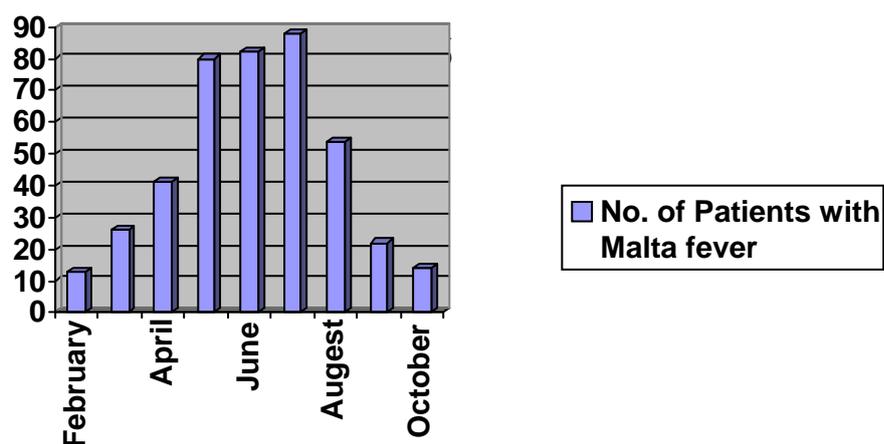| Moth	No.	%
February	13	3
March	26	16.2
April	41	9.8
May	80	19
June	82	19.5
Juley	88	21
Augest	54	12.8
September	22	5.3
October	14	3.4
total	420	100

Table (2) the distribution of the patients with Malta fever according to the age group.

Age group	No.	%
0-9	34	8
10-19	63	15
20-29	113	27
30-39	105	25
40-49	63	15
50-59	25	6
60-69	15	3.5
70	2	0.5
total	420	100

Table (3) the clinical and symptoms of Malta fever in the studied group.

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Clinical state	No.	%
Fever	386	92
Sweating & rigor	319	76
Headache	265	63
Joint pain & backache	281	67
Nausea & vomiting	118	28
hepatosplenomegaly	75	18

Table (4) the distribution of gender among the studied patients

Gender	No.	%
Male	172	41
Female	248	59
Total	420	100

Table (5) the distribution of patients according to their occupations

Occupation	No.	%
Children(> 9)	34	8
Farmers & butchers	53	12.5
House wives	174	41.5

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Others	159	38
Total	420	100

Table (6) the distribution of the patients according to their residency

Residency	No.	%
Rural	246	60
urban	174	40
total	420	100

Table (7) the history of milk or milk products ingestion among the patients.

Ingestion of milk products	No.	%
Yes	370	88
No	50	12
Total	420	100

Discussion:

Brucellosis is still endemic in Iraq and diagnosis of the disease is still difficult due to different clinical presentation.

In this study, the clinical state showed that fever 92%, sweating and rigor 76%, headache 63%, joint pain and backache 67%, nausea and vomiting 28% and hepatosplenomegaly 18%, which are nearly with the result shown by

(2,5,6)

the distribution of the disease during the months of the year showed increasing of the disease prevalence during may (19%),June(19.5), July (21%) and August(12.8%), more then in other months and this is probably due to increase reproduction of animals and exposure of human to placenta and genital excretion of animals, and also due to

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increase milk and milk production during these months and this also shown by (7,8,9).

The disease was more frequent among age groups 20 and 60 years of age in both males and females, similar results shown by (2,5).

The distribution of the disease was more among females (59%) then males, which most of them are house-wives, same result by (10). The disease is more prevalent among farmers and butchers, house-wives than other groups, also shown by (2,7,8).

Regarding the residency, the disease is more distributed in rural area than in urban area, and this is due to the presence of animals and more contact with animal's secretion, their feeding, cleaning, milking which was done usually by females, besides that women are exposure to infection due to manipulation of meat (8).

The people have no more information about milk boiling, they don't boiling milk well especially in the rural area, also most of them prepeae fresh cheese without boiling the milk so they will be exposed to infection.

Health education about the disease is needed especially how to boil milk and how to deal with animals and control of the disease among animals which is indicated by veteranian(3).

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