

Study the incidence of brucellosis in Samawa city

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Abstract

The study was carried out in Samawa hospital at AL-Samawa city for the period of January to December, (2005). to study the incidence of Brucellosis. In this study 368 samples with Brucellosis were isolated investigated from patient. The predominant associated of causes the disease were brucella melitensis and brucella abortus the age - group of (<1-5 years) was the most frequent group. Over 66% of Cases were females, Incidence of the disease among patients were from rural area, case records at hot months more than in cold months.

Introduction

Brucellosis is Primarily zoonotic disease affecting animals and man in many parts of the world (1.2).The disease is world wide in its distribution. Its incidence varies from country. (3.Over 500000 infections of brucellosis are reported yearly to World Health Organization from 100 Countries ·Infection of B. melitensis , distribution mediterranean region, Latin American.and Asia. B. abortus infection-occurs world wide but has been effectively eradicated in several European countries

Japan and Palestine Land. *B. suis* occurs mainly in the Midwestern United States, South America and South East Asia, whereas *B. canis* infection is most common in North and South America, Japan and Central Europe (4). Human infection is usually acquired by animal contact (5). The disease is transmitted to human through ingestion of unpasteurized milk and milk products or ingestion of uncooked meat. Meantime, it is an occupational hazard to laboratory worker, veterinarians, farmers, shepherds and meat inspectors (6). Human to human transmission is rare (7) but has been reported in association with blood transfusion, bone marrow transplantation (8). The disease in man may be an acute or chronic disease persisting for many years (1). In Iraq, Brucellosis is a common disease (9). The main source of the disease in Iraq is the domestic animals (10) because there is no previous study about human brucellosis in Samawa city to know relation to date, age, sex, area by; infection with brucella.

Materials and Methods

Between January to December (2005), 368 samples were isolated from patients who were admitted to Samawa hospital, and were recognized to be suffering from brucellosis. In each patient the following points were examined: sex, age, residence and date of infection. About (5ml) of blood were collected from patients for blood culture and serological test.

Bacteriological examination represented by microbial and biochemical tests. were performed to detect and isolate of microorganism. Identification of each isolate was done according to Macfaddin (11). Bacteriological diagnosis was confirmed serologically by using aconventional brucella agglutination test provided from (Welcome reseasch: Lab\UK) positive and negative control. serum were used for each batch of the test.

Results

The study period covered the year2005 at AI- Samawa city (368) samples of individuals examined , only 253 were positive for brucella culture . while serologic test was positive in all cases, B. melitensis was isolated and diagnosed in zoo cases . B - abortus was in 168 cases see table- 1 .

**Table(1) Distribution of cases according to brucella culture
(positive)and serological test
(positive)**

Spp.of brucella	No of blood culture (positive)	No of serological (positive)
B. melitensis	143	200
B. abortus	110	168
Total No.	253	368

The age group distribution of Brucella patients was from (1-35) year old .The most cases of A brucellosis were occurring among age - group (1-5 year old) followed in age- group (26- 35 year old) and less commonly in other age groups of patients. see table-2

Table - 2 Age distribution of patients with brucellosis

Age-group of	No.	%
<_1-5	96	26.08
6-10	27	7.33
11-15	20	5.43
16-20	30	8.15
21-25	45	12.22
26-30	71	19.2
31-35	89	16.03
36-40	8	2.17
41-45	12	3.26
Total No	368	100

In table - 3 . the females were more commonly affected than males. number of males patient were 122 (33 %) and that female patient. 246 (65.3 % making male: female ratio (1 :2).

Table(3) Distribution of cases according to sex patients

SEX	No. of patients	%
Males	122	33.16
Females	246	66.84
Total No.	368	100

Incidence of brucellosis among individuals. from rural areas were 220.;(58.6%) and from urban were. 148 (40. 1),see

table-4

Table (4) Frequency distribution olcases by residence of patients

Residence	NO	%
Rural	220	59.8
Urban	148	40.2
Tatal No .	368	100

In table - 5 show seasonal variations of infection with brucellosis among individuals, peak number of eases was in June and .July .

Table(5) Frequency distribution of cases according to month

Month	No. of cases	%
January	29	7.88
February	26	7.06
March	23	6.25
April	38	10.33
May	39	10.59
June	46	12.5
July	45	12.22
August	34	9.23
September	25	6.79
October	18	4.89
November	20	5.43
December	23	6.25
Total No	368	100

Discussion

Only 253 samples out of 368 patients were positive for bacterial culture, while serological tests were positive in all cases of brucellosis. These results may be due to the fact that brucellosis is intracellularly at infection and difficult to cultivate, and the most patients were taken antibiotics treatment before bacterial diagnosis (12). The incidence of B. melitensis infection is highly in Al - Samawa area, we believe that due to the people who consume raw sheep and cow milk, and most people have sheep, goat and cow at their home. In this study it was found that the disease was greater in age - group of patients (<1 - 5 year) and followed in (26 in 35 years old) in both sexes. These results due to milk and its products are one of, major source of brucellosis in Iraq (10): The patients of age .group (1-5 years old) are more milk consumers especially fresh which is unpasteurized. while the patients of age group (26 - 35 years old). This may be related to increase risk of exposure as house wives, farmers and shepherds. This can be explained by the fact that farmers are direct contact with infected-dairy animal and also more prone to consume milk and its products that are local mode (13). Brucellosis affects both sexes but the females were more commonly affected than males This was similar to results of other studies (10, 13) finding was contrast with results of other reports (9). Infection of females with brucellosis

more than males, this explained that the majority of females . were house wives who were direct contact with meat and milk or animal in caring (14).The incidence of brucellosis among individuals from rural areas were (58.6 %) . This result may be due to the most people in al - Semawadistrict are of rural habits and indirect contract with domestic animals. The disease was more common during months of summer. This my by due to the exposure to brucellosis was high ,because of Increase milk production_ following the deliveries of animals in the . spring and contamination of milk is more marked (4).from this study we concluded that brucellosis is endemic in al- semawa city

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دراسة انتشار الإصابة بداء البروسلات في مدينة السماوه

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الخلاصة

أجريت الدراسة في مستشفى السماوه العام الواقعة في مدينة السماوه للفترة من كانون الثاني ولغاية كانون الأول لعام 2005 لدراسة انتشار داء البروسلات جمعت 368 عينه من المرضى المصابين بداء البروسلات إذ كانت الأسباب الرئيسة هو جرثومة البروسلات المالطية B. Melitensis وجرثومة البروسلات المجهضة B. abortus وأكثر الإصابة كانت في الأعمار الأقل من خمس سنوات وأكثر من 66% من الحالات المصابة كانت في الإناث ، وان حدوث المرض شائع بين المرضى القادمين من المناطق الريفية ، كما إن أكثر الحالات سجلت في الأشهر الحارة منها في الأشهر الباردة.