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BRUCELLOSIS IN MAN

REVIEW

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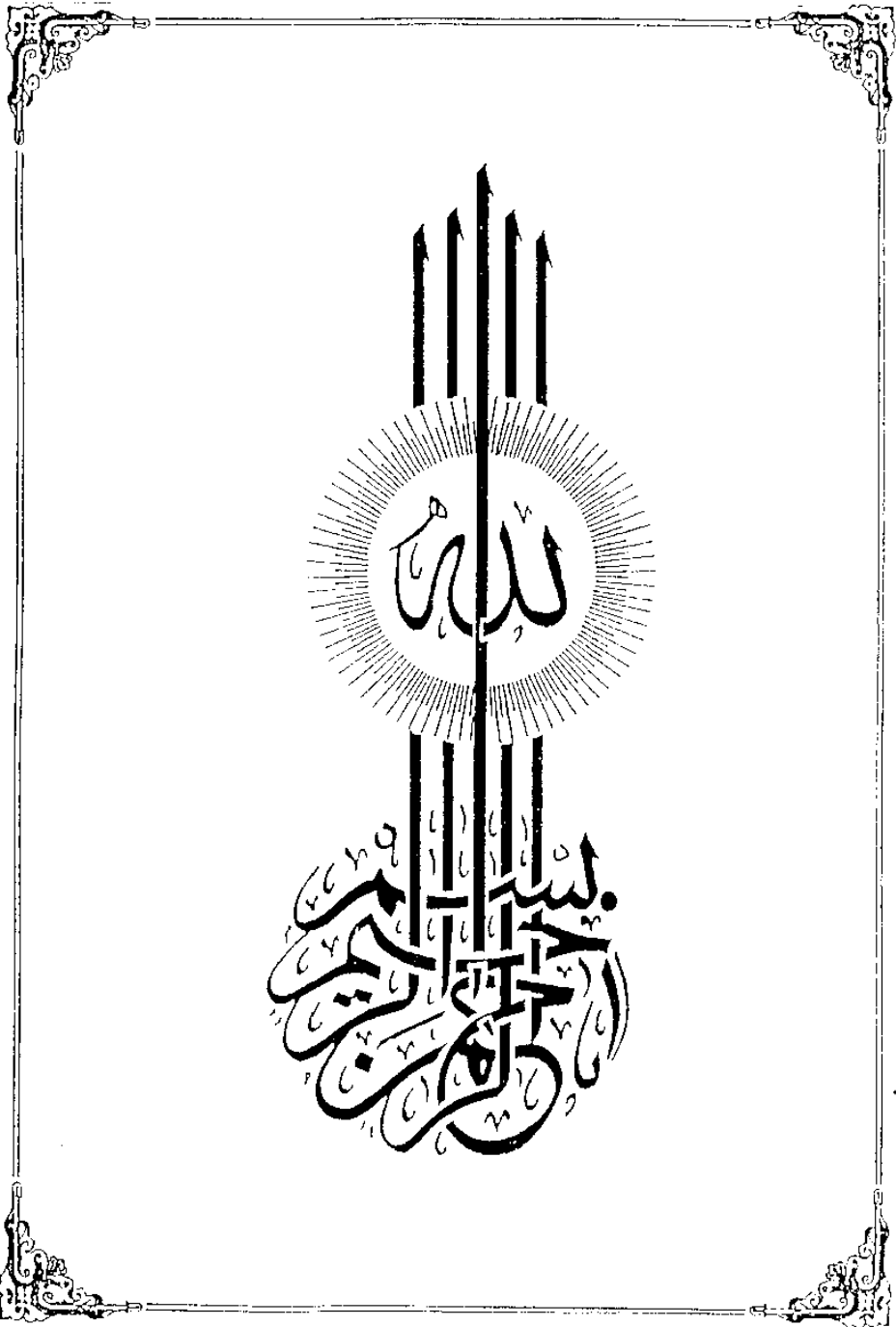
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ABBREVIATIONS

approx.	:	approximately.
B.	:	brucella
BAT	:	bureau of animal industry
CFT	:	complement fixation test.
cot	:	cotrimoxazole
Elisa	:	enzyme linked immunosorbent assay
FUO	:	fever of unknown origin
IFA	:	indirect immuno fluorescence
LPS	:	lipopolysaccharide
2ME	:	2-mercaptoethanol agglutination test
min.	:	minute
OD	:	optical density
PBS	:	phosphate buffered saline
PG	:	peptidoglycan
R	:	rough
RIA	:	radio immuno assay.
RTD	:	routine test dilution
S	:	smooth
SAT	:	standard tube agglutination test
St	:	streptomycin
Tc	:	tetracycline
Temp.	:	Temperature
Y	:	yersinia

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INTRODUCTION AND AIM OF THE WORK

Introduction

Brucella infection in man also known as Mediterranean fever (Bruce in 1886) is an infection caused by four species belonging to the genus brucella which are essentially pathogens of animals.

Brucellosis is distributed world wide, there are about half a million cases per year, it is an important public health problem in developing countries, it is considered an occupational disease.

Brucellosis in man is an acute, subacute or chronic infectious disease characterized by attacks of irregular fever, chills, sweating and other manifestations.

The possibility of serious complications emphasizes the need for early diagnosis and treatment of all cases of brucellosis.

Diagnosis is difficult because of low index of suspicion by the physician and special conditions are required for culturing the organism and because of the different multisystem manifestations which can

occur with several other diseases.

The disease is of indefinite duration with a tendency to frequent remissions and relapses.

The most useful serological tests is serum antibrucella immunoglobulin estimation by radio immunoassay, and enzyme linked immunosorbent assay.

Aim of the Work:

The aim of this work is to review the etiology, geographical distribution, pathogenesis, clinical features and complications, methods of diagnosis, the treatment and control of brucellosis in man.

This has been achieved by reviewing the pertinent literature on this subject in different parts of the world.

The contents of this review have been divided into the following parts:

- Part I : Epidemiology.
- Part II : Etiology, Pathogenesis and phage typing.
- Part III: Clinical pictures.
- Part IV : Laboratory Diagnosis.
- Part V : Treatment.
- Part VI : Prevention and Control.

REVIEW
OF
LITERATURE

PART I

E P I D E M I O L O G Y

There is about half million of cases brucellosis per year (Havas , 1980). Brucellosis (Mediterranean fever is an important public health problem in developing countries in mediterranean areas, African countries and some middle Eastern countries (Young, 1983).

In Egypt, Brucellosis is the third most common infective cause of fever of unknown origin after salmonellosis and tuberculosis, the patients were from the rural delta (Hassan & Farid 1974).

The state of Kuwait is one of developing countries where the incidence of brucellosis is still on the increase (Araj et al., 1986) from 115/100.000 in 1976 to 68.9/100.000 in 1985.

In Saudi Arabia the incidence of brucellosis was very high; 14.3% compared to 3.3% for enteric fever. (Kambal et al., 1983).

Argentina, Greece & Italy each reporting more than 1000 cases a year (Kanfmann & Martone, 1980).

Other countries that have reported large numbers of cases of brucellosis include : Mexico, Spain, Peru, Iran, Turkey, Chad & Kenya. America (Arnow, et al. , 1984).

Seasonal variation is considered to play no important role in the prevalence of brucellosis. (O.K. 1979).

The WHO Tech. Series (1971) stated that the season may be summer due to the water shortage or winter due to the more closeness to animals.

The infection caused by four species belonging to the genus brucella: Br. melitensis which occur chiefly in Mediterranean area (Malta fever), Africa and parts of the far East and America. Br. Suis is found in the U.S.A. and in Denmark. Br. Abortus is found in Britain. Br. canis: several cases are reported.

Distribution of patients with brucellosis according to age and sex

Number of patients

Age(yrs)	Number of patients				Total no. (%)	
	Males (N=104)	Females (N=69)	Males (N=16)	Females (N=6)	Acute	Chronic
0-9	--	--	--	1	--	1(4)
10-19	22	14	--	--	36(21)	--
20-29	34	25	1	--	59(34)	1(4)
30-39	19	16	3	1	35(20)	4(18)
40-49	16	9	6	3	25(14)	9(41)
50-59	7	3	2	1	10(6)	3(14)
60-69	3	1	2	--	4(2)	2(9)
≥ 70	3	1	2	--	4(2)	2(9)
Mean age	36	33	48	36	35	44

(Araj. et al., 1986)