

BRUCELLOSIS IN OBSTETRICS

by

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SUMMARY

All the 160 serum samples sent for various investigations were screened for evidence of brucella antibodies. The problem of infertility, repeated abortions and prematurity may be due to brucellosis in these cases exposed to cattle, sheep and goat.

Introduction

Brucellosis is a zoonotic disease. Manifestations of brucellosis are protean. The disease is known for its affinity towards female genital tract in animals. Therefore, it was called as epidemic abortive fever. However, manifestations of brucellosis in human beings in the form of obstetrical problems have not been sufficiently stressed. The purpose of this communication is to narrate our experience in this field.

Material and Methods

All the serum samples submitted for various investigations to the department of microbiology, are being screened for evidence of brucella antibodies. The screening tests adopted are:

- (a) Slide agglutination test and
- (b) Surface fixation test of Castaneda.

The samples found positive in screen-

ing tests were further processed for standard tube agglutination test (STAT), 2 mercapto ethanol tests and blood culture wherever possible. If required, Coombs test was also carried out.

Those cases where the brucella agglutination titre was 80 I.U. or more, were taken as cases of brucellosis. From 1971 to 1982, 160 have been diagnosed as brucellosis. Of these cases, 18 presented with bad obstetrical history. The relevant features of these cases are presented in the Table I.

The antigens used in serological tests were obtained from Indian Veterinary Research Institute, Izatnagar, U.P.

All the patients were treated with 1 gm. of Streptomycin/day and Tetracyclines 250 mg. x QDS for 3 weeks. Tetracyclines were not given to those patients where pregnancy was protected. In such cases along with streptomycin, Sulphadiazine 0.5 gm. x QDS was administered.

Follow-up was not possible in any of these cases.

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TABLE
Relevant Features of the Cases of Brucellosis With Obstetrical Problems

Age in Years	Urban/Rural	Occupation	Presenting symptoms	Gyn. & Obst. history	Clinical diagnosis and Course in hospital	Br. Aggl. titre
25	R	Farmwife	Sterility	M.L. 10 years	Primary sterility	160 I.U.
34	R	Milkmaid	Amenorrhea 4 months Pain abdomen and passing blood clots — 3 days	M.L. 20 years Gr. IX, Para III 5 abortions	Threatened abortion, aborted	640 I.U.
19	R	Farmwife	Antenatal check-up	Not contributory	—	80 I.U.
30	U	Farmwife	Amenorrhea 5 months Bleeding P.V. and pain abdomen — 1 day	M.L. 12 years Gr. III, Para II	Threatened abortion, aborted	320 I.U.
28	R	Farmwife	Amenorrhea 5 months Abdomen pain and bleeding P.V. — 6 days	M.L. 6 years Gr. IV, Para Nil 3 abortions	Threatened abortion	640 I.U.
19	R	Housewife	Amenorrhea 6 months Pain abdomen 3 days	M.L. 2 years Gr. II, abortion	Threatened abortion, aborted	640 I.U.
27	U	Housewife	Amenorrhea 9 months Abdomen pain 1 day	M.L. 10 years Gr. II, 1 abortion 2 years ago	Delivered a premature baby (under-weight)	640 I.U.
18	R	Farmwife	Amenorrhea 8 months, pains — 1 day	M.L. 3 years Gr. II, 1 abortion at 3rd month, 1 year ago	Threatened abortion	160 I.U.
22	U	Housewife	Amenorrhea 8 months Pains, bleeding PV 4 days	M.L. 6 years Gr. III, Para I FTND 3 years; 1 abortion 1 year ago	Delivered a premature baby	160 I.U.

TABLE I (Continued)

Age in Years	Urban/Rural	Occupation	Presenting symptoms	Gyn. & Obst. history	Clinical diagnosis and Course in hospital	Br. Aggl. Titre
27	R	Farmwife	Sterility	M.L. 3 years H/o abortion 6 months ago	Primary sterility	80 I.U.
30	R	Sheepmaid	Amenorrhea 9 months Pain abdomen 2 days	M.L. 15 years Gr. V, Para III 1 premature delivery	Delivered a under-weight baby	640 I.U.
20	R	Housewife	Amenorrhea 7 months Bleeding PV 4 days	M.L. 1½ years	Aborted	160 I.U.
30	R	Farmwife	Amenorrhea 6 months, pain, bleeding P.V. — 1 day	M.L. 10 years Gr. II, 1 FTND	Threatened abortion, aborted	160 I.U.
22	R	Farmwife	Amenorrhea 4 months, P.V. bleeding 2 days	M.L. 5 years Gr. II, 1 FTND	Aborted	160 I.U.
22	R	Farmwife	Amenorrhea 9 months, Pain abdomen 2 days	M.L. 4 years Gr. II, 1 FTND Still birth 2 years back	Delivered a premature baby	320 I.U.
29	U	Housewife	Amenorrhea 4 months H/o repeated abortions	Had 6 abortions	Habitual abortions, aborted	160 I.U.
30	U	Housewife	Repeated abortions	M.L. 10 years 5 abortions at 3-5 months period	Habitual abortion	320 I.U.
27	R	Farmwife	Repeated abortion	M.L. 7 years 3 abortions	Habitual abortion	160 I.U.

Comments

By serological investigations 160 cases were diagnosed as brucellosis during a period from 1971 to 1982. All these cases fulfilled the W.H.O. criteria of 80 I.U. or more titre in the tube agglutination test. Before treating the cases, all other possible diseases/causes were thoroughly investigated and excluded. Of the 160 cases, 18 (11%) presented with one or the other obstetrical problems.

Age incidence varied from 18 years to 34 years. Thirteen cases were from rural and 5 were from urban areas.

History of close association with domestic animals like cattle, sheep or goats was found in 11 cases. Of these 10 were farm wives, 1 was sheepmaid and 1 was a gavali (milkmaid). Remaining 7 cases did not give history of direct contact with animals.

Regarding the presenting symptoms, 9 came with signs and symptoms of threatened abortion and 7 of them aborted in the hospital on admission while 2 cases were treated conservatively. Premature delivery was the feature in 4 cases. Repeated abortion was the complaint of 2 patients. Primary sterility was noted in 2 cases. During antenatal check-up, the disease was detected in 1 case. Therefore, it appears that important signs and symptoms of brucellosis in females of reproductive age group, are abortions, premature delivery and sterility. The titre of the brucella antibodies was 80 I.U. in 2 cases, 160 I.U. in 8, 320 I.U. in 3, 640 I.U. in 5 cases.

De Forest (1917) claimed that brucellosis not infrequently did interfere with the normal course of pregnancy.

Spink (1956) has recorded 1 case where brucellosis was possibly responsible for a miscarriage. Criscuolo and di Carlo (1954) studied 200 cases of brucellosis

among pregnant women and observed that abortions occurred in slightly less than 10 per cent of the pregnancies. They stressed the fact that pregnancy accentuates the severity of the disease and that the fetus is most likely to be lost during the first trimester. Other complications of pregnancy include a high infantile mortality rate and an increased incidence of retained placenta and post-partum haemorrhage. Cavanagh and Talisman (1969) have mentioned that brucellosis contributes significantly to prematurity and neonatal problems.

Frei (1929) has recorded an instance of abortion in a farm wife. Similarly Mathur (1969) has recorded 4 cases of abortions in patients with brucellosis from Karnal (Punjab).

Janabon and Kerleau (1939) isolated brucella organisms from the placenta and placental exudates.

Present study indicates that the problem of sterility, repeated abortions and prematurity etc., in those patients with history of exposure to cattle, sheep and goat may be due to brucellosis. One is not expected to forget brucellosis in our country.

References

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