

ANIMAL MYCOPLASMOSIS IN IRAN ⁺_§

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Mycoplasmosis is a serious problem in ruminant and poultry in Iran. The economic loss caused by the disease, in animal and poultry husbandry, is very important. In this communication we intend to describe the Mycoplasmas isolated in Iran and the research work which has been done on this subject.

HISTORY

The important Mycoplasmosis in animals and poultry which we have in the country are:

1 — **Contagious Bovine Pleuro-pneumonia:** About 30 years ago Dr. L. Delpy and Dr. M. Kaveh from Razi State Institute reported one case of a disease similar to Contagious Bovine Pleuro-pneumonia (CBPP) in cattle in the North of Iran near the Caspian Sea. This was the only ever reported and since this time we have never seen or heard of any other case of the disease. May be, the disease existed in Iran but like in European countries, under unsatisfactory climatic conditions it has been eradicated and now we are free of the disease in Iran.

2 — **Contagious Agalactia:** The contagious agalactia in sheep and goats in Iran was diagnosed by the clinical postmortem examination many years ago and was confirmed later by bacteriological examination and isolated of Micro-organism and is now a widespread problem among sheep and goats in the country.

3 — **Contagious Caprine Pleuro-pneumonia:** The contagious caprine pleuro-pneumonia (CCPP) was also diagnosed many years ago, based on clinical symptoms and postmortem examination. In 1955, for the first time, *Mycoplasma capri* was isolated from the infected lungs of a sick goat. The caprine pleuro-pneumonia is a big problem in our country where there is about 20% mortality in goats.

4 — **Mycoplasmosis in Poultry:** mycoplasmosis in poultry was diagnosed in Iran for the first time in 1955 by Sohrab and Baharsefat (12) and in 1956 Jungherr in collaboration with Sohrab (10) confirmed its existence by serological tests not only in suspected flocks near Tehran but also in the North and South of Iran.

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5 — Lamb Pneumonia and Pleuro-pneumonia: In 1955, 1956 and 1957 an enzootic lamb pneumonia and pleuro-pneumonia occurred in the Institute farm (11). When searching for the causal agents different micro-organisms such as: Pasteurella, Psittacosis like Virus (PLV) and mycoplasma were isolated.

EXPERIMENT

In this section, we intend to describe the research work which has been done on each of the above subjects.

1 — Contagious Agalactia: The first isolation of *Mycoplasma agalactiae* was from a milk sample taken from an infected sheep. *M. agalactiae* was also isolated from an artheritic lesion and from the eye. Bory and Entessar (7 & 8) prepared a vaccine against sheep and goat agalactia. The vaccine was a formalized culture of *M. agalactiae* and was used successfully in some part of the country.

In 1966 one of us (Baharsefat) received a research Grant from the American National Institutes of Health (NIH) to study the "Control of *Mycoplasma* in Sheep and Goats". During this time we started a classical studies on this subject. We prepared special antigen and we have done all the serological examinations on infected and vaccinated sheep and goats sera. So far the following research works have been done by our group on the subject:

- a) Chemical Composition of *M. agalactiae*.
- b) Immuno-Electrophoresis patterns of *M. agalactiae* antigen.
- c) Hemagglutination test with *M. agalactiae* antigen.
- d) Plate agglutination test with *M. agalactiae* stained antigen.
- e) Agglutination test with *Mycoplasma* antigen in sheep and goats sera inoculated with *M. agalactiae*.
- f) Anti-biogramme of *M. agalactiae* (In vitro)
- g) Agalactia vaccine.

The results of all these studies have been published in the monthly report of the Razi State Institute and Archives de l'Institut Razi.

2 — Contagious Caprine Pleuro-pneumonia: For many years a formalized tissue vaccine has been prepared at the Razi State Institute against this disease using a suspension of lung and pleural exudates obtained from infected goats. This vaccine has been used in all parts of the country with satisfactory results and now the farmers prepare this suspension by themselves.

Sohrab (11) isolated a *Mycoplasma* from a lung lesion but could not infect healthy goats with that strain. By intra-tracheal inoculation of pleural exudate and infected lungs suspension, however, the disease has been produced in healthy goats.

3 — Mycoplasmosis in Poultry: The disease is very important in native purebred chicken. The serological study with a Connecticut University antigen showed that 70% of imported chicken were positive while the rate in native birds was about 20%.

Extensive research work has been done by Baharsefat and Adler in connection with the serological study of *M. gallisepticum* (1,2,3 & 4).

The effect of antibiotics on *M. gallisepticum* has been tested by Sohrab & al. (11) and they found that Tylosin and Erythromycin are more effective than other antibiotics and Sulfnamides (In vitro).

4 — **Lamb Pneumonia and Pleuropneumonia:** After the isolation of a *Mycoplasma* from infected lamb lungs, many examination have been done to infect lambs with this strain but the results were negative. We isolated a *pasteurella* and a virus strain as well. The inoculation of the *pasteurella* was without any result but with virus we could produce some pneumonia but not as serious as in the natural infection.

SUMMARY

Contagious Bovine Pleuro-pneumonia (CBPP) has been eradicated in Iran and now the country is free of the disease.

Contagious Agalactia, Contagious Caprine Pleuro-pneumonia (CCPP), *Mycoplasma* in Poultry, Lamb Pneumonia and Pleuro-pneumonia still exist.

Some research work has been done in connection with their diagnosis and prevention but still many problem remain to be solved in the future.

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RESUME

La pleuro-pneumonie contagieuse de bovidés a été éradiquée en Iran et actuellement on n'en aperçoit plus.

L'agalaxie contagieuse, la pleuro-pneumonie contagieuse des chèvres, la mycoplasmoses des volailles ainsi que la pneumonie et la pleuro-pneumonie des agneaux existent encore.

Quelques recherches ont été faites en connection avec leurs diagnostiques et préventions mais il existe encore des problèmes qu'il faut résoudre plus tard.

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