

## CONTROL AND LABORATORY DIAGNOSIS OF CLASSICAL SWINE FEVER IN SLOVENIA

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## INTRODUCTION:

In our country pigs in herds with more than 10 breeding sows, pigs in herds with more than 50 pigs and all pigs fed with garbage must be vaccinated against classical swine fever every year. The lapinized "Chinese" vaccine of our production is used for vaccination.

In 1978 we had the last outbreak of classical swine fever in Slovenia. Clinical symptoms, post mortem lesions and the histological examination of brains were proved with inoculation of suspected material to pigs which developed typical signs of swine fever. Immediate steps which have been taken: stamping out of all clinical suspicious pigs and pigs which had been in contact with them, vaccination of all pigs in the area and the application of the sanitary measures, stopped the outbreak in a very short time.

After that outbreak two methods for rapid diagnosis of classical swine fever were developed: immunofluorescence on PK-15 cells and modified temperature reaction on rabbits.

Immunofluorescence on PK-15 cells is very useful for a rapid diagnosis (Carbrey et al. 1965, Fuchs 1968, Gustafson, 1974). This method has almost the same sensitivity as pig inoculation (Gustafson, 1974, Peckham et al., 1970, Rensang and Der Boer, 1968).

Classical swine fever virus can be propagated in rabbits (Mayr et al., 1977, Mierzejevska, 1965). Rabbits inoculated with lapinized strain of swine fever virus developed second or third day after the inoculation the temperature about 41°C. No other lesions can be observed. The application of material with swine fever virus one week before lapinized strain is used prevents temperature reaction (Aynaud and Larenaudie, 1975, Schjerning-Thiesen, 1975). This reaction of rabbits is used for swine fever diagnosis.

## METHODS:

Cell line PK-15 for test grows in Leighton tubes on Eagle MEM with lamb serum. Cells are inoculated with 20% suspension of spleen, tonsils, kidney or lymph nodes. After 24 hours slides are fixed and tested with three specific anti-swine fever conjugates.

Temperature reaction on rabbits: For the test only rabbits with temperature under 39,7°C (healthy rabbits) are useful. Rabbits are inoculated (i/v)

with the same material as cells. One week later rabbits are i/v inoculated with live lapinized swine fever vaccine. The temperature is controlled three days after.

In the tests two reference strains (PAV-1 and Alfort) and negative controls are always used.

## RESULTS:

All cells inoculated with material containing classical swine fever virus showed specific fluorescence with all conjugates.

Rabbits had normal temperatures second and third day after vaccine application. They were immunized against swine fever by virus from the material.

## CONCLUSIONS:

Both tests gave the same results. Tests are sensitive. Material with virus was stored for 2 years at -25°C and tests were positive. Immunofluorescence is also a rapid method. The results can be obtained 24 hours after the inoculation of cells. The temperature test with rabbits lasts 10 days, what is a faster than the inoculation of pigs.

Veterinary measures (stamping out, vaccinations in all area, stop of movement, sanitary measures) can eliminate an out-break in an area in a very short time and the dissemination of swine fever among pigs is stopped rapidly. These two laboratory tests confirm the disease in a very short time.

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