INTRODUCTION:

In our country pigs and hogs with more than 10 breeding sows, pigs in herds with more than 30 pigs and all pigs raised with garbage must be vaccinated against classical swine fever every year. The lipopolysaccharide vaccine of our production is used for vaccination.

In 1970 we had the last outbreak of classical swine fever in Slovenia. Clinical symptoms, post mortem lesions and the histological examination of brains were proven 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 EL-15 cells and modified temperature reaction on rabbits.

Immunofluorescence on EL-15 cells is very useful for a rapid diagnosis (Carroy et al. 1965, Fecke 1968, Gustafson, 1974). This method has almost the same sensitivity as pig inoculation (Gustafson, 1974, Fecke et al. 1970, Messang and Ver Boer, 1965).

Classical swine fever virus can be propagated in rabbits (Ryz et al. 1967, Herreraca, 1969). Rabbits inoculated with lipopolysaccharide of swine fever virus developed second or third day after inoculation the temperature up to 38°C. No other lesions can be observed. The application of material with swine fever virus one week before lipopolysaccharide in mice prevents temperature reaction (Aymard and Laminudin, 1975; Scherveninger-Thomsen, 1979). This reaction of rabbits is used for swine fever diagnosis.

METHODS:

Cell line EL-15 for test grows in Brighton tubes on Eagle’s medium with 2% calf serum. Cells are inoculated with 20% suspension from spleen, tonsils, kidney or lymph nodes. After 24 hours slides are fixed and tested with three specific antiswine fever conjugates.

Temperature reaction on rabbits: for the test only rabbits with temperature under 39.8°C (healthy rabbits) are useful. Rabbits are inoculated (1 ml) with the same material as cells. One week later rabbits are i/v inoculated with live lipopolysaccharide swine fever vaccine. The temperature is controlled three days after.

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

RESULTS:

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

Rabbits and normal temperature second and third day after vaccine application. They were immunised 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 15 hours after the inoculation of cells.

The temperature test with rabbits lasts 3 days, what is a faster than the inoculation of pigs.

Vaccination measures (stamping out, vaccinations in all area, stop of movements, sanitary measures) can eliminate an outbreak in an area in a very short time and the dissemination of swine fever material on pigs is stopped rapidly. These two laboratory tests confirm the disease in a very short time.

REFERENCES: