Key words: frozen semen, dye «Aniline Blue», DNA fragmentation, fertility of bull spermatozoa.

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OBTAININGOF ANTICOENUROSIS SERUM

Annotation

The article refers to veterinary helminthology, immunology and biotechnology, in particular to the method of obtaining the immune serum used in the serological diagnosis of the price tag.The method of obtaining an antiserum serum provides (in comparison with the known method) the production of a more active serum, which makes it possible to increase the reliability of serological reactions.

Key words: helminth, coenurosis, adjuvant, antigen, vesicle fluid, immunization, cyst, titer, antibodies.

Introduction

General Description: Adults (Taeniamulticeps) occur in the small intestine of dogs and wild carnivores, and can reach lengths of up to 1 metre. The Coenurus (intermediary stage) occurs in sheep and is usually localised in the brain or spinal cord. Other ruminants and man can also be infected. The Coenurus is a large cyst full with liquid and many floating scolices, it could reach 5cm or more in diameter[1].

Life Cycle: Indirect cestode life cycle. Adults in dogs pass gravid proglottides with eggs in the faeces. When the proglottides burst the eggs are disseminated in the environment contaminating pastures and water supplies. When ingested by sheep (or other ruminants) the eggs hatch. The hexacanths develop into metacestods which penetrate the intestinal wall and enter the blood stream. Only those parasites which reach the nervous system will develop into a fully developed Coenurus in 7 to 8 months. The definitive host (dog) gets infected by eating infected sheep tissue.Location: Adult tapeworms live in the small intestine of dogs. Coenuruscerebralis are found in the brain or spinal cord of sheep.Geographical Distribution: Worldwide.Significance: Feeding sheep carcasses to dogs may cause infection and perpetuation of the infection cycle. The intermediary stages (Coenurus) cause severe problems in infected sheep including death[2, 3].

Effect on Intermediate Host: An acute meningoencephalitis in lambs may occur as a consequence of migration of large numbers of immature stages of this parasite. The chronic stages develop as a result of increased destruction of brain and spinal cord tissue as the Coenurus grows. The neurological clinical signs are recognised as "gid" or "staggers" and are dependent on the location of the cyst in the central nervous system.

Coenuruscerebralis is the intermediatory larval stage of Taeniamulticeps: a tapeworm which is found in the small intestine of dogs and wild canids [5]. Sheep are considered to be the animal species most susceptible [4, 6]. Ovine coenurosis is found in Africa and Asia, with prevalence ranging from 1.3 to 9.8 % [7, 8]. C. cerebralis inhabits the central nervous system and

causing a disease known as ‘‘coenurosis’’, ‘‘gid’’ or ‘‘sturdy’’ [9]. C. cerebralis reaches the central nervous system hematogenously and it usually affects the young animals [10].

The aim of our investigation was obtaining activity, anticoenurusserum specifity with indication of antigen from causative agent and adjuvant.

Material and methodology:

Development of a method for obtaining a more active serum.

This research result is is expressed in increasing serum activity and achieved by the fact that in the method for producing an antiserum serum, which comprises obtaining the antigen and immunizing the animals in admixture with the adjuvant.

As producers, rabbits were used with established immunization periods, doses and the site of antigen administration.

As an antigen, a mixture of hydrolysed pepsin and ultrasound scores with alcohol deposition was used, use of sheep with subcutaneous immunization as producers of them did not ensure the production of sufficiently active serum. Therefore, the antigen was additionally enriched with alcohol extract of proteins of a specially treated germinate shell of coenurus cysts and vesicle fluid, and rabbits were used as producers to produce serum as a producer, their immunization regimens, doses and place of antigen administration were tested.

Cysts isolated from host tissues were opened, the liquid part was drained into a cuvette, a bubble liquid was obtained. Then the inside of the cysts was scraped off with brunches of tweezers and the scolex were washed into the cuvette using 0.9% sterile sodium chloride solution to a ratio of 1: 5 - a scolex suspension was obtained. The inner germinative shell was separated from washed shells of cysts - fragments of the germinal membrane were obtained. The germinal membrane was homogenized at 5,000 rpm for 3-5 minutes and resuspended in 0.9% sterile sodium chloride solution in a ratio of 1: 5. 25-30 cm3 of a 1-normal solution of chemically pure hydrochloric acid, 3-5 g of pepsin and 10 cm3 of toluene were added to each liter of the prepared suspension of the germinal sheath, the mixture was shaken thoroughly and the pH was adjusted to 3.0 (1-normal hydrochloric acid solution).

The resulting mixture is merged into a joker-apparatus and placed in a thermostat, where it is maintained with continuous stirring by a joker-aplarate and a temperature of 38-39 ° C for 48-72 hours. After 1, 3. 6, 12, 18 and 24 hours, the pH of the medium is checked and adjusted to 3.0 (1-normal hydrochloric acid solution).

The resulting slurry is poured into bottles with stirring. Antigen is controlled for sterility, using special nutrient media (absence of bacterial contamination and fungal microflora indicates the purity of the drug). Antigen activity is checked by titration in CFT and IHA.

Result of the research

Prepared for immunization rabbits (weighing not less than 2.5 kg) are immunized with the price-dependent antigen following scheme: 1st day - antigen in a mixture with an equal volume of incomplete Freund's adjuvant in rabbit paw pads, 0.25 cm3 per each, the protein content should be at least 5 mg / cm^3, the 7th day - intramuscularly for 20 mg of protein in 2 points of the gluteal muscles; Day 14 - intravenous immunization of rabbits according to the scheme: first 0.02 mg of protein, after 30 minutes - 0.2 mg, and after 30 minutes - 20 mg. After 21 days, this manipulation is repeated. Blood sampling starts from the 3rd day after the last injection of the 1st immunization unit, 40-50 ml of blood are administered, three times, with an interval of 72 hours. Repeated blood is taken from the 3rd day after intravenous immunization, according to the same scheme. Next, the cycle of immunization and blood supply is repeated.

Starting from the 3rd day after the start of immunization, the titer of precipitating antibodies in the quantitative precipitation is monitored. When the antibody titer reaches at least 300 μg / cm^3 in the quantitative precipitation, rabbits take 40-50 cm of blood, three times, with an interval of 72 hours, then take a break until the next immunization cycle. If the antibody titers

are lower than indicated, additional intravenous immunization of the animals is also performed after 21 days. When the antibody titre is reached after the second immunization cycle of not less than 300 μg / cm^3 in the CFT, rabbits take 40-50 cm3 of blood, three times, with an interval of 72 hours, then take a break until the next immunization cycle.

Confirmation of the achievement of a positive effect: The obtained sera are tested for sensitivity and specificity in the quantitative precipitation reaction, in comparison with sera obtained by methods known in the past. The test results are shown in Table 1.

Table 1 - The results of tests of the activity and specificity of sera obtained by the proposed method, in comparison with other method

Immunization	The results of serological reactions	
	Quantitative precipitation reaction, мg/см^3	Complement fixation test, (average serum titer)
Theproposed	275	1:320
Control	225	1:160

As can be seen from the table, the proposed method, in comparison with the known method, makes it possible to obtain diagnostic sera with higher activity.

Thus, the method of preparation of antiserum serum provides (in comparison with the known method) the production of highly active and highly specific serum, which makes it possible to increase the reliability of serological reactions.

The result provided by the invention is expressed in an increase in serum activity.

A method for the preparation of an serum comprising the preparation of an antigen and immunization of the animals in admixture with the adjuvant, wherein the antigen contains an alcohol extract of scolexes, proteins of a specially treated withgerminative shell of coenurus cysts and vesicle fluid, and rabbits are used as animals, which are immunized as follows: 1 day-antigen in a mixture with an equal volume of incomplete Freund's adjuvant in the paw pads, 0.25 cc per each, the protein content should be at least 5 mg / cm^3, the 7th day - intramuscularly for 20 mg of protein in 2 points of the gluteal muscles; Day 14 - intravenous immunization of rabbits according to the scheme: first 0.02 mg of protein, after 30 minutes - 0.2 mg, and after 30 minutes - 20 mg.

The method of obtaining anserum provides (in comparison with the known method) the production of a more active serum, which makes it possible to increase the reliability of serological reactions.

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АНТИЦЕНУРОЗДЫҚ ҚАН САРЫСУЫН АЛУ

Аңдатпа

Антиценуроздық қан сарысуын алу тәсілі антиген алумен және жануарларды адъювант қосындысымен және антиценуроздық қан сарысумен иммундеу арқылы (белгілі әдістермен салыстырғанда) белсенді қан сарысуын алумен ерекшеленеді.

Кілт сөздер: гельминт, гемонхоз, ценуроз, адъювант, антиген, көпіршік, иммунизация, циста, титр, антидене.

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ПОЛУЧЕНИЕ АНТИЦЕНУРОЗНОЙ СЫВОРОТКИ

Аннотация

Получениеантиценурозной сывороткис использованием антигена возбудителя адъювантаобеспечивает (по сравнению с известным способом) получение более активной сыворотки, что позволяет повысить достоверность серологических реакций.

Ключевые слова: гельминты, ценуроз, адъювант, антиген, пузырь, иммунизация, циста, титр, антитела.

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ВЛИЯНИЕ КОРМОВОЙ ДОБАВКИ НА ВИТАМИННО-МИНЕРАЛЬНЫЙ СОСТАВ МЯСА АФРИКАНСКОГО СТРАУСА В УСЛОВИЯХ ЮГО-ВОСТОКА КАЗАХСТАНА

Аннотация

В представленной статье изучена эффективность разработанной нами комплексной минеральной кормовой добавки, состоящей из природных органических и неорганических компонентов. Результаты эксперимента показали, что кормовая добавка оказывает благотворное влияние и на витаминный состав мяса страусов. Кроме того, исследуемая