MYCOPLASMOSIS IN ANIMALS pdf

1: Mycoplasmosis in dogs | Vetlexicon Canis from Vetstream | Definitive Veterinary Intelligence

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Pathophysiology Non-hemotropic Mycoplasmosis Respiratory disease Mycoplasmaspp are thought to form part of the normal flora in the upper respiratory tract of dogs. Mycoplasma cynosis the only species to be commonly associated with respiratory disease in dogs. During pneumonia the lungs become colonized withmycoplasma. It is unclear as to whetherMycoplasmais a primary or secondary pathogen in canine pulmonary disease. Several species ofMycoplasmahave been isolated from the respiratory tract of healthy and diseased dogs see above. Mycoplasmamay transcend the respiratory tract from the oropharynx following infection or immunosuppression. The role played by other mycoplasma species in canine respiratory disease remains to be established. Urogenital disease Mycoplasmas are isolated in large numbers from the urine of dogs with urinary tract infections. Collection of voided urine, or via catheterization, may contaminate the urine with other bacterial species. Mixed infections with other bacteria andMycoplasmaspecies are common. Conditions that that pre-dispose an animal to bacterial infection, such as tumors and urinary calculi, may promoteMycoplasmagrowth. Mycoplasmas of the reproductive tract are considered to be opportunistic. Hemotropic Mycoplasmosis Hemoplasmosis Canine anemia Mycoplasma haemocanis, formally known as aHaemobartonellaspecies, has recently been reclassified within the genusMycoplasmaby analysis of the 16S rRNA gene. More recently infection with an additional hemoplasma,Candidatus M. The acute form ofM. Unless other diseases are present, clinical signs are rarely observed in non-splenectomized dogs infected withM. Concurrent symptoms including lethargy, weight loss, fever and anorexia are found in some clinical cases. Dogs may show autoagglutination and can be Coombs positive. In rare cases fatalities may ensue. Vet Microbiol , PubMed. Chalker V J Canine mycoplasmas. Res Vet Sci79 1 , PubMed. Microbiology Pt 10 , PubMed. Chapter pp Infectious diseases of the Dog and Cat. W B Saunders Co.

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2: Mycoplasma Disease in Cattle

The presence of mycoplasmosis will be concurrent with inflammatory cells. If polyarthritis is suspected, an analysis of the synovial fluid, the fluid found in the cavities of certain joints (e.g., knees, shoulders), may be useful.

The majority of these mycoplasmae have shown a strong correlation to malignant transformation in mammalian cells in vitro. Mycoplasma infection and host cell transformation[edit] The presence of Mycoplasma was first reported in samples of cancer tissue in the s. The changes caused by chronic mycoplasmal infections occur gradually and are both morphological and genetic. They also become hyperchromatic due to an increase of DNA in the nucleus of the cells. In later stages, the cells lose the need for a solid support to grow and proliferate, as well as the normal contact-dependent inhibition cells. These include the addition of chromosomes, the loss of entire chromosomes, partial loss of chromosomes, and chromosomal translocation. All of these genetic abnormalities may contribute to the process of malignant transformation. Chromosomal translocation and extra chromosomes help create abnormally high activity of certain proto-oncogenes , which caused by these genetic abnormalities and include those encoding c-myc , HRAS , [27] and vav. Partial or complete loss of chromosomes causes the loss of important genes involved in the regulation of cell proliferation. Partial reversibility of malignant transformations The malignant transformation induced by mycoplasmae is also different from that caused by other pathogens in that the process is reversible. The state of reversal is, however, only possible up to a certain point during the infection. The window of time when reversibility is possible varies greatly; it depends primarily on the Mycoplasma involved. In the case of M. Connections to cancer in vivo and future research[edit] Epidemiologic, genetic, and molecular studies suggest infection and inflammation initiate certain cancers, including those of the prostate. In a study to understand the effects of Mycoplasma contamination on the quality of cultured human colon cancer cells, a positive correlation was found between the number of M. Strong evidence indicates the infection of M. Studies on lung cancer have supported the belief that more than a coincidental positive correlation exists between the appearance of Mycoplasma strains in patients and the infection with tumorigenesis. The protein also causes the growth, morphology, and the gene expression of the cells to change, causing them to become a more aggressive phenotype. Patients with renal cell carcinoma RCC exhibited a significantly high amount of Mycoplasma sp. This suggests Mycoplasma may play a role in the development of RCC.

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3: Mycoplasma gallisepticum - Wikipedia

This text expands beyond food animals to include companion animals and laboratory rodents. It replaces the title "Laboratory Diagnosis of Mycoplasmosis in Food Animals".

Published online Jan 8. This article has been cited by other articles in PMC. Abstract Background Mycoplasma fermentans has been associated with respiratory, genitourinary tract infections and rheumatoid diseases but its role as pathogen is controversial. The purpose of this study was to probe that Mycoplasma fermentans is able to produce respiratory tract infection and migrate to several organs on an experimental infection model in hamsters. One hundred and twenty six hamsters were divided in six groups A-F of 21 hamsters each. Animals of groups A, B, C were intratracheally injected with one of the mycoplasma strains: Mycoplasma fermentans P wild strain , Mycoplasma fermentans PG 18 type strain or Mycoplasma pneumoniae Eaton strain. Groups D, E, F were the negative, media, and sham controls. Fragments of trachea, lungs, kidney, heart, brain and spleen were cultured and used for the histopathological study. U frequency test was used to compare recovery of mycoplasmas from organs. Results Mycoplasmas were detected by culture and PCR. The three mycoplasma strains induced an interstitial pneumonia; they also migrated to several organs and persisted there for at least 50 days. Mycoplasma fermentans P induced a more severe damage in lungs than Mycoplasma fermentans PG Mycoplasma pneumoniae produced severe damage in lungs and renal damage. Conclusions Mycoplasma fermentans induced a respiratory tract infection and persisted in different organs for several weeks in hamsters. This finding may help to explain the ability of Mycoplasma fermentans to induce pneumonia and chronic infectious diseases in humans. Several researches thought that mycoplasmas may act as cofactors in HIV associated disease progression [3]. The role of mycoplasmas in RA is controversial. Early work suggesting a link between Mycoplasma fermentans and human RA was unconvincing because it was isolated in a small proportion of patients, the bacteria was rarely isolated from the genitourinary tract and there was no evidence that it could colonize other sites [2]. The advent of polymerase chain reaction PCR provided new insights. More evidence has accumulated recently to establish an important and emerging role for Mycoplasma fermentans as pathogen in human respiratory tract and rheumatic diseases [1 , 2]. Presence of Mycoplasma fermentans in throat of humans let us think about the possibility that the bacteria may cause respiratory tract infections and spread to several organs, colonize them and persist there for several weeks. We developed an animal model of respiratory tract infection produced by Mycoplasma fermentans. Syrian hamsters have several advantages over other laboratory animals for evaluating the role of Mycoplasma fermentans as pathogen that is the reason why they were chosen [5] Animal models are particularly useful when the pathogenic role of a microorganism is controversial. The purpose of this study was to probe that Mycoplasma fermentans is able to produce a respiratory tract infection and migrate to several organs in hamsters. Methods Animals One hundred and eighty six hamsters were included in the study. Sixty hamsters were used to determine the infecting dose and animals to test the ability of Mycoplasma to colonize and induce damage in the respiratory tract and different organs. Humidity, temperature, lighting and ventilation were controlled during the experiment. Animals were cared according to the guide for the care and use of laboratory animals of the U. Animals were cared in Claude Bernard bioterio of the University. Analgesics and anesthetics were administered to animals in order to avoid suffering. A throat swab of each animal was cultured to check that they were not colonized by Mycoplasma fermentans before the experiment began. Strains Three strains of mycoplasma were used in this study. Mycoplasma fermentans P isolated in our laboratory from the respiratory tract of an asthmatic patient 12 passages in culture media. Mycoplasma pneumoniae Eaton strain and Mycoplasma fermentans PG 18 isolated from the genitourinary tract were kindly provided by Dr. Cassell from the University of Alabama at Birmingham number of passages in culture media unknown. Sixty hamsters were used to determine the infecting dose of mycoplasmas. Six hamsters of group I were injected intratracheally with 0. The same procedure was repeated with the other strains Mycoplasma fermentans PG 18 and Mycoplasma pneumoniae. Six hamsters of group IV were not injected with mycoplasmas neither ketofen and were considered negative controls. The day that

hamsters were injected with mycoplasmas was considered day 0. Two hamsters of each group were sacrificed on days 10, 20 and Animals were sacrificed by an injection of an overdose of sodium pentobarbital. Two fragments of lung, trachea, kidney and brain were cut one fragment of each organ was deposited in 0. The other fragment was fixed and stained with hematoxylin and eosin to do a histopathological study. The same procedure was performed for each dose and negative controls. Under aseptic conditions hamsters were intratracheally injected using a syringe. Animals were divided in six groups of 21 hamsters each group A-F. Hamsters of group A were intratracheally injected with 0. Hamsters of group B were injected with Mycoplasma fermentans PG Animals of group C were injected with Eaton strain of Mycoplasma pneumoniae, hamsters of group D were not injected with mycoplasmas. Hamsters of group E were injected with 0. All animals controls and infected received the same drugs analgesics and anesthetics so they were submitted to the same stress. Colonization of the respiratory tract and other organs Three hamsters of each group A to E were sacrificed on days 1, 5, 10, 15, 25, 35 and 50 after the inoculation. Two fragments of 1 cm3 of trachea, kidney, lung, heart, brain and spleen were cut. One fragment was cultured in E media and the other was processed in a histochinet for the histopathological study. A blood sample from each animal was cultured for mycoplasmas. Detection of mycoplasmas by culture One fragment of each organ was cultured doing two tenfold dilutions in E media, each fragment was also cultured in agar blood plates to isolate aerobic bacteria. A blind passage of broths on E plates was done on day When the pH indicator of the media turned yellow a passage on E plates was done. Detection of mycoplasmas by PCR Polymerase chain reaction test was performed in all broth cultures positive or negative of different organs and in all organs extracted direct detection of infected animals and controls to detect the presence of Mycoplasma fermentans. This primer set flanks a bp region in the M. The reaction mixture contained 50 mM KCl, 1. A diluted lysate of M. Mycoplasmas were identified by PCR. Mycoplasmas were recovered from all the hamsters infected in at least one organ trachea, lungs, heart, spleen, kidney, brain or blood during the whole experiment. Table 1 Recovery of mycoplasmas from organs and blood of experimentally infected hamsters Mycoplasma.

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4: Murine Respiratory Mycoplasmosis

All quarters are usually affected in lactating animals. In addition, the same farm may also have problems with lameness, reproductive problems, calf pneumonia, and adult cow respiratory disease. Cows affected with acute Mycoplasma mastitis have a dramatic drop in milk production. Affected quarters will be warm, swollen and light brown.

Mycoplasma Disease in Cattle In recent years, more than 20 species of Mycoplasma, Ureaplasma and Acholeplasma have been isolated from cattle with different diseases. All of the 20 aforementioned species have been referred to as the Mycoplasmas. It is generally believed that Mycoplasmas play a secondary role in infections, most often exacerbating pre-existing disease; but it has been shown that Mycoplasma bovis M. In general, treatment of Mycoplasma diseases is difficult since Mycoplasma spp. In addition, polymerase chain reaction PCR is a sensitive method which can be used. To detect acute infection, paired serum samples are recommended, since rises in antibody titers occur days after acute infection with certain Mycoplasma spp. PCR is an extremely sensitive method which can be used to confirm Mycoplasma infection. Two types of pneumonia are associated with Mycoplasma infections: Contagious bovine pleuropneumonia is caused by infection with Mycoplasma mycoides subsp. In "calf pneumonia", enzootic pneumonia , Mycoplasma spp. Common involved bacteria are Histophilus somni H. Most commonly, respiratory viruses are primary pathogens. Several species of Mycoplasma may be isolated from calves with pneumonia, but only a few of these species are considered pathogenic. Respiratory pathogenic Mycoplasma spp. With the exception of M. Mycoplasmas can be introduced in a herd by subclinical Mycoplasma carriers. These cattle shed the organism through nasal discharge for months to years without showing clinical signs. Clinical signs observed in cattle with pure Mycoplasma pneumonia are coughing, induced by stress or movement, slight tachypnea, low grade fever and mild depression. At necropsy, cranioventral areas of lungs are red-blue, firm and ooze purulent material on cut section. Histologically, there is chronic bronchointerstitial pneumonia charac-terized by peribronchiolar and perivascular lymphocytic cuffings, purulent bronchiolitis, accumulation of neutrophils and macrophages within alveolar lumens, epithelialization of alveolar septae and atelectasis. Due to prominent lymphocytic cuffings, this type of pneumonia is also called "cuffing pneumonia". In addition, fluorescent antibody tests for detection of antigen of distinct Mycoplasma spp. Intramuscular application of oxytetra-cycline, erythromycin, or tylosin is recommended. In mixed infections with Mycoplasma spp. Since "enzootic pneumonia" is a multifactorial disease associated with impaired pulmonary defense, proper management is also very important i. Although several Mycoplasma spp. The disease spreads rapidly within a herd, thus the usual history in a farm with Mycoplasma mastitis is that several cows within a short period of time have acute mastitis in one or more quarters. All quarters are usually affected in lactating animals. In addition, the same farm may also have problems with lameness, reproductive problems, calf pneumonia, and adult cow respiratory disease. Cows affected with acute Mycoplasma mastitis have a dramatic drop in milk production. Affected quarters will be warm, swollen and light brown. On palpation, the parenchyma may be firm and often fine nodular. Drawn milk appears normal initially, but separates rapidly in a floccular deposit and a clear supernatant. Acute mastitis may be followed by chronic mastitis, intermittent acute flare-ups, or subclinical infection. Cows with subclinical infection can return to normal milk production, but they may continue to shed Mycoplasma spp. Microscopically, acute infection causes neutrophilic mastitis characterized by neutrophilic infiltration of lobular interstitium, degeneration, and necrosis of alveolar epithelium and neutrophilic accumulation within alveoli, which is often followed by abscess formation. In subacute stages, macrophages predominate as inflammatory cells. Chronic Myco-plasma mastitis is characterized by hyperplasia of alveolar and ductular epithelium, aggregation of lymphocytes within interstitium and around ducts, interstitial fibrosis and lobular atrophy. Immunoblot performed on milk samples is another method which can be used for diagnosis. Once Mycoplasma mastitis is detected within a herd, identification of infected cattle and their strict separation or culling may be necessary, since the disease is highly contagious and often therapy resistant. Oral infection of calves from dams with Mycoplasma mastitis may also occur. Lameness caused by M. One clinical sign of Mycoplasma arthritis is marked lameness. Capsules of affected

joints are warm, distended and fluctuant on palpation. Gross examination of the affected joints will show fibrinosuppurative synovitis and tenosynovitis with cartilage erosions. Affected joint capsules are distended by opaque, cream colored exudates, which often contains fibrin flakes. Eroded cartilage may be replaced by polypoid granulation tissue. The synovium is often reddened and edematous. Neutrophils may accumulate within the joint space and there may be hyperplasia of synovial cells and villi. Synovial vessels are often congested and occasionally thrombosed. Treatment follows the protocol of any septic arthritis. Recommended is lavage of affected joints with a through-and-through flushing method, most likely on a daily basis over the next weeks. Local antibiotic therapy may be used. It must be considered that Mycoplasma spp. Antibiotics effective in Mycoplasma-induced lameness include danofloxacin, enrofloxacin, and tylosin. Aspirin can be given for pain management. The immunology of the bovine respiratory disease complex. Enzootic Pneumonia of Calves. Inf Dis of Cattle: Veterinary Learning Systems Co. Polyarthritis due to Mycoplasma bovis infection in adult dairy cattle in Northern Ireland. Mycoplasma infections in growing cattle. Diseases of Dairy Cattle. Large Animal Internal Medicine, 2nd ed. Lameness in Feedlot Cattle.

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5: Mycoplasma - Wikipedia

In all animals, the motor unit of skeletal muscle consists of the motor neuron, the neuromuscular junction, and muscle fibers. Muscle dysfunctionâ€"such as ataxia, paresis, or paralysisâ€"most commonly originates in which of the following locations?

Reproductive problems including miscarriage and poor fetal development Causes of Mycoplasma Infection in Cats Mycoplasma infection is caused by exposure to the bacteria. This can occur in almost any setting, as this type of bacteria is very common. It can spread easily between animals, making it common in shelters and kennels as well as multi-pet homes. The infection is not limited to cats, and can be caught from or given to other companion animals. Humans are also at risk of infection. Immunodeficiency and conditions that weaken or suppress the immune system increase the risk of contracting the disease. Diagnosis of Mycoplasma Infection in Cats A veterinarian can diagnose Mycoplasma infection using various medical testing procedures to visually confirm the organisms in blood, urine, or other fluids. Before proceeding to this step, a physical examination and medical history of the cat are required. If clinical signs point to a bacterial infection, your veterinarian will collect fluids for testing purposes. The fluid collected will depend on the type and location of the symptoms your cat is exhibiting. For example, a urinalysis or urine testing are effective in situations where the animal is experience related symptoms. Joint fluid, mucus, and blood samples can also be analyzed. Dye staining has been shown to be an effective method for locating the bacteria that cause the infection in cats. Treatment of Mycoplasma Infection in Cats No single treatment or protocol is considered consistently effective in treating Mycoplasma infection. Treatments will vary depending on the severity of symptoms and location of the infection within the body. Antibiotics are the most common form of treatment, but the type of antimicrobial the bacteria is susceptible to is not the same in all cases. To completely overcome the disease, treatments may continue for an extended period of time. Although treatment plans may differ, most cats will not require hospitalization unless their symptoms are very severe or in animals with poor immune function. Recommended treatments may include: Most cats will require a minimum seven to ten-day course of antibiotics to treat the primary infection. Because Mycoplasma infections can be hard to eradicate, more than one course of antibiotics may be necessary for a full recovery. If pain, inflammation, or fever is severe, this category of painkiller may be prescribed. Too much of this type of medication can be very dangerous to your cat. Recovery of Mycoplasma Infection in Cats Most cats with normal immune function are expected to make a full recovery from the disease, although it may take several weeks to completely rid your pet of the infection. Once antibiotic treatment has begun, symptom improvement can be expected within a few days. Anemia symptoms may take longer to recover from. Reinfection is a risk with Mycoplasma, so pet areas should be thoroughly cleaned and disinfected. Continued disinfection should be maintained until your pet has completed their antibiotic treatments. If there are multiple animals in the home, isolation may be necessary to prevent the spread of infection.

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6: Mycoplasma Infection in Cats - Symptoms, Causes, Diagnosis, Treatment, Recovery, Management, Cos

In: Mycoplasmosis in Animals: Laboratory Diagnosis (Eds. Genetic association of the porcine C9 complement component with hemolytic complement activity Haemotropic mycoplasmosis or haemoplasmosis in dogs is associated with Mycoplasma haemocanis and Candidatus Mycoplasma haematoparvum, which were formerly known as Haemobartonella canis.

Advice What is Bacterial Infection Mycoplasma? Mycoplasmas are a large family of gram-negative bacteria that lack a cell wall. They are considered to be the smallest form of life capable of reproducing as opposed to viruses. Many species of mycoplasma are commensal, meaning they live in other organisms without either hurting or harming them, but others cause infection especially when they are able to proliferate in large numbers. There are hundreds of species of mycoplasma. They cause disease in many different animals, including dogs and humans, but species are typically host specific. At least fifteen different species have been identified in dogs. Mycoplasmas are commonly associated with the canine infectious respiratory disease CIRD , also known as kennel cough. They are just one of a number of different organisms responsible for CIRD. Mycoplasma infection in the respiratory tract weakens a dog, increasing susceptibility to bacterial and viral infection. In many cases, it can be hard to tell which organism is the primary cause. Most studies show that mycoplasmas live in the upper respiratory tract of healthy dogs, but when they descend into the lower respiratory tract they cause infection and even pneumonia in severe cases. Mycoplasmas are also found in the genitourinary system in dogs; species that affect this area are categorized under the separate heading ureaplasmas. As in the respiratory system, ureaplasmas are part of the normal bacteria flora that colonize in healthy dogs, but under conditions of stress or immune-suppression they can proliferate and cause lesions that lead to infertility. Additionally, species of mycoplasma can attack red blood cells and cause anemia. These are called hemitropic mycoplasmas or hemoplasmas. They are transmitted through ticks and parasites, or dog to dog via blood transfusions or other methods of fluid exchange. They rarely cause symptoms in healthy dogs, but pets with a compromised immune system especially from splenectomy can develop severe hemolytic anemia and other symptoms of ill health. Mycoplasmas are groups of very small bacteria that lack a cell wall. Some species can cause an infection called mycoplasmosis in dogs. Respiratory symptoms are the most common, but the bacteria can also affect the reproductive and urinary systems, and blood pathogens may cause anemia. Kennel dogs and dogs with weakened immune systems are more at risk. Book First Walk Free! These are some of the signs you might notice in your dog. Exposure to the bacteria Staying in a kennel or shelter especially long term Possible air contamination with M.

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7: Mycoplasmosis in Animals: Laboratory Diagnosis - Google Books

Regulations on the use of antibiotics in food animals are rapidly evolving and should be consulted before use. Overview of Mycoplasmosis in Poultry Mycoplasma.

History[edit] The disease was first described in It was described as a respiratory disease that was found in domestic poultry. This was because of the mixture and close contact between the wild turkeys and domestic poultry during feeding time. This led to an increased awareness of the disease and health monitoring protocols in wild turkey restoration programs. These protocols are still being followed today by state wildlife agencies. House finches at the time were called Hollywood finches. It is believed that these house finches are less resistant to the disease because they were introduced and were highly inbred. The disease was stopped by the Rocky Mountains. These symptoms cause house finch populations to decline due to increased predation and susceptibility to trauma from impaired vision. Birds have been seen rubbing their eyes on branches or on bird feeders, which can help spread the disease. With infectious sinusitis, the birds have symptoms of coughing, swollen sinuses, nasal and ocular discharge, tracheal rales, labored breathing, impaired vision, depression and weight loss. The disease can even cause death and found to especially occur if combined with E. A tenovaginitis may also develop and the organism can be found in the oviduct and semen of infected male birds, leading to infection in the egg and eventually of the young poulty. Most songbirds are resistant except for the wild house finches and some similar species in North America. When they are in a flock, transmission occurs by direct and indirect contact from the movement of the birds, people and fomites from infected species. With many outbreaks, the source of the infection in the flock is unknown. Some sources that could possibly cause infection and transmission are cold weather, poor air quality, concurrent infections, and some live virus vaccinations. It is difficult to obtain a sample from frozen carcasses. Tissue swabs are taken from the inner eyelids, sinus, and trachea. Many serology tests can be performed to diagnose M. The SPA test is more commonly used because it is the simplest and least expensive. Small bubbles will appear in the corners of the eyes and sinuses will swell up. Once infected, they are carriers for the disease for life. Some birds have good resistance to the disease while others may die; some become ill and recover and others may not show any symptoms at all. There is currently no risk to humans. For domestic animals, there is a high concern and there should be a prevention of any interaction between wild birds and domestic poultry. Wild bird species affected by the disease are infectious and are often found in close contact with domestic species. These are given through food, water or injections. Especially tylosin gives good results in the feed. At this point, it is very difficult to verify if previously infected birds are still infected with M. Treatment and release is not wise for disease control in wild populations. Dluhyd; Yiping Zhaoe; Ralph A. Krausea 30 December Applied and Environmental Microbiology. Field Manual of Wildlife Diseases: General Field Procedures and Disease of Birds.

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8: Animal model of Mycoplasma fermentans respiratory infection

Mycoplasma: a bacterium lacking a cell wall. Mycoplasma pulmonis: a commensal species specific organism carried by nearly all pet rats, and which colonizes the luminal surface of the respiratory epithelium. Murine Mycoplasmosis: a disease entity caused by mycoplasma pulmonis, and which is responsible for respiratory and genital infections in pet rats.

Murine Respiratory Mycoplasmosis Both wild and laboratory rats and, to a lesser degree, mice are the natural hosts of murine respiratory mycoplasmosis MRM. Hamsters, guinea pigs, and rabbits may carry the causative bacteria, Mycoplasma pulmonis, but do not develop lesions Mycoplasma pulmonis is transmitted horizontally by direct contact by aerosol and vertically by in utero transmission. Venereal transmission may be possible. Once inside the host, the bacteria damages host cells by causing dysfunction of the cilia of respiratory and genital tract epithelial cells. In the respiratory tract, M. Signs include rales and dyspnea, snuffling and chattering, ocular and nasal discharge, rubbing of eyes, and head tilt. In severe cases, weight loss and reduced fertility may occur. The severity of disease is dependent upon the interaction of host, pathogen and environmental factors. Additionally, dietary deficiencies of vitamins A and E may add to the severity of disease. More than 40 strains of M. Temperature, humidity, and intracage ammonia levels are important environmental factors,. Diagnosis of MRM is dependent on cultural isolation of M. The lower sensitivity and specificity of commercially available ELISA test kits make them less desirable. Gross and histopathologic lesions are commonly present but are not diagnostic. Gross lesions of the upper airways include suppurative rhinitis, otitis media, laryngitis, and tracheitis. In the lung, suppurative bronchopneumonia, atelactasis, bronchiectasis and abscesses can occur. When widespread, bronchiectasis and abscesses lead to the "cobblestone" lung appearance commonly seen in endstage disease. Histopathologic lesions include suppurative exudates in airways. Microscopic lesions have a neutrophilic response, accumulation of plasma cells and lymphocytes, and include epithelial hyperplasia and metaplasia. Murine respiratory mycoplasmosis must be differentiated from other bacterial pneumonias such as infection with Coryne-bacterium kutscheri, Streptococcus, cilia-associated respiratory CAR Bacillus infection, and mycotic pneumonia. Concurrent infections with Sendai virus, pneumonia virus of mice, and other viruses are common. It is also a primary causes of early mortality in affected colonies. However, the use of SPF rats has limited its prevalence. Treatment with tetracycline or tylosin may suppress clinical signs in pet rats, but caesarian derivation and barrier maintenance, along with rigorous testing, is necessary in research facilities. Genital mycoplasmosis in rats; a model for intrauterine infection. Am J Repro Immunol. Role of upper and lower respiratory tract immunity in resistance to Mycoplasma respiratory disease. J Infec Dis Biology and Disease of Rats. Laboratory Animal Medicine, 2nd ed. Academic Press, New York. Handbook of Rodent and Rabbit Medicine. Pathology of Laboratory Rodents and Rats.

9: Health Guide: Mycoplasma / Mycoplasmosis

Mycoplasma are a mollicute genus of bacteria that lack a cell wall around their cell membranes. This characteristic makes them naturally resistant to many common antibiotics such as penicillin or other beta-lactam antibiotics that target cell wall synthesis.

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