

Pigeon Canker¹

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Trichomoniasis (pigeon canker) is the most common disease of pigeons. Approximately 80 percent of pigeons are infected with this organism. The organism is a microscopic flagellate classified as a protozoan. Different strains, *Trichomonas gallinae* or *Trichomonas columbae*, vary greatly in their ability to cause disease. The disease occurs worldwide in warm climates or during warm weather. It may occur at any time of the year in commercial squab operations. Adult pigeons frequently carry the trichomonads without showing signs of disease. When the adult pigeon is stressed, however, the organisms may multiply profusely. A mild infection can then turn into a serious condition. Stresses include other diseases, parasitic infestations, or over breeding.

Affected pigeons in a loft may cease to feed, become listless and ruffled in appearance, and lose weight before death. Pigeons often have difficulty when closing their mouths because of lesions in the oral cavity. They drool and make repeated swallowing movements. Watery eyes may be apparent in birds with lesions located in the sinuses or tissues around the eyes. Diarrhea, increased water intake, and respiratory distress may be noted. Birds may die suddenly due to suffocation if the lesion blocks the opening of the trachea. The disease becomes more severe in birds that are noticeably emaciated. The thin weakened bird loses the inclination to fly and will "take to the wing" reluctantly.

Pigeons that are carriers often transmit trichomonads to their young during feeding. The disease is common in 10- to 24-day-old squabs. As a method of feeding their young, pigeons regurgitate the sloughed, fat laden cells lining the crop (crop milk) into the oral cavity of the squabs. If squabs are infected with only small numbers of the protozoan, they may develop immunity which is maintained by constant low-level exposure. If squabs are infected with large numbers, a severe outbreak may occur and endanger the entire young generation.

Lesions of canker are usually most extensive in the mouth, pharynx, or esophagus but may occur at other sites including the crop, proventriculus, or sinuses. The infection is promoted by minor injuries to these tissues. The spelts and awns from grains can easily cause small lesions. The lesions first appear as small, circumscribed, and elevated areas on the surface of the oral mucosa. They may be surrounded by a thin red zone. The lesions may increase in size and coalesce. The build-up of white to yellow/tan caseous material may be sufficiently extensive to partially or completely block the lumen of the esophagus. Organisms may also enter the body through the unhealed navel of squabs. In this form, necrotic

tumor-like swellings occur under the skin adjacent to the navel. Lesions can spread to various internal organs, particularly the liver. Large, well-defined, and yellowish areas of hepatic necrosis may be found on necropsy examination.

Typical signs and lesions are very suggestive of the disease. Demonstration of large numbers of organisms in the oral fluids is usually considered enough evidence for diagnosis. The small plaques in the mucosa should be differentiated from pox, vitamin-A deficiency, or candidiasis.

Since the organism is transmitted from parent to squab, every effort should be made to treat or remove infected birds from the flock. If possible, depopulate at regular intervals and thoroughly clean and disinfect the premises.

In addition, the following preventive measures should help: practice a high standard of sanitation at all times; do not add birds to an established flock since they may be carriers (if birds are added, quarantine for 30 days); and provide a source of clean, fresh water eliminating all sources of stagnant water.

The antiprotozoal drugs which were used successfully in treating this disease, such as dimetridazole and metronidazole, have been removed from the market. Experimentally, a number of drugs are active against trichomonas infection. Use of 0.1% copper sulfate (100 mg per 100 ml of drinking water), 0.5% hydrochloric acid or 0.02% mercuric chloride (sublimite) is worth investigating. The optimum time to treat breeding pairs is at the initiation of egg production.