



# SOUTH PACIFIC COMMISSION

## FOWL POX



**Fig. 1:** *Fowl pox (skin or 'dry' form). The characteristic pox lesions begin as small white lumps before forming brown scabs. Lesions are most frequently seen on the comb, wattles and face.*

**FOWL POX**, a viral infection caused by the fowl pox virus, has been known to infect poultry since the earliest days of poultry keeping. In countries where the poultry industry is well organised, the disease has become less important through the use of vaccines. It is recorded as present in most countries within the Pacific Islands region.

## INFECTION

The fowl pox virus is most common in domestic poultry but also occurs in turkeys, pigeons and other avian species. Ducks are not believed to be susceptible. The incubation period can extend from 4 to 14 days. The mortality rate varies with each species and the age at infection. Spread through the flock occurs slowly and outbreaks may persist for several months. The virus usually gains entry through breaks in the skin caused by pecking or fighting. However biting insects are also known to be capable of transmitting the disease. The virus cannot penetrate intact skin or epithelium.

In some countries, the incidence of outbreaks has been observed to increase during the wet season. The main method of transmission during this period is believed to be due to increased mosquito activity within infected flocks.

## CLINICAL SIGNS

The disease occurs in two forms: a skin form and an oral diphtheritic

form sometimes called avian diphtheria.

The **skin** or '**dry**' form is recognised by the presence of characteristic pox lesions on the comb, wattles, eyelids and at the corners of the beak (Fig. 1). In some cases the feet, legs and skin may be affected. Beginning as small white raised areas (macules), the lesions increase in size to become yellow and fluid-filled (vesicles) before forming brown wart-like scabs. When these are removed, a raw and bleeding surface remains.

The **diphtheritic** or '**wet**' form is characterised by small caseous ('cheesy') white patches in the mouth and throat area, and around the epiglottis (Figs. 2 and 3). When these unite, feeding can be difficult due to the formation of large nodules of dead tissue.

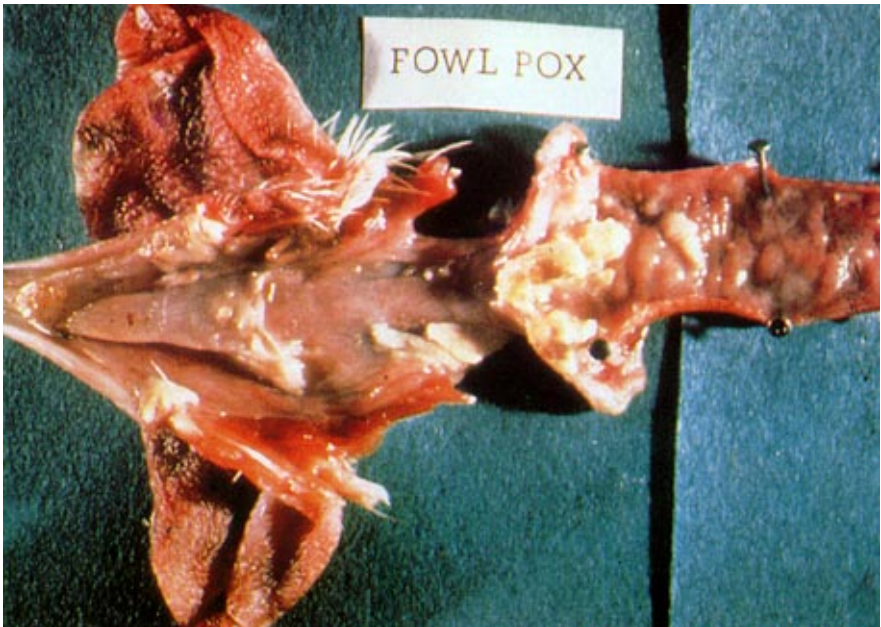
When lesions occur in the trachea (windpipe), they may be difficult to distinguish from the diphtheritic forms of infectious laryngo-tracheitis (ILT).

Death can occur through starvation or suffocation caused by nodules obstructing the larynx.

## DIAGNOSIS

Recognition of typical pox lesions on the head, legs or skin is sufficient to diagnose the skin form of fowl pox.

Diagnosis of the diphtheritic form is more difficult and can be confused



**Fig. 2 and 3:** *Fowl pox (diphtheritic or wet form), 'cheesy' white patches are present on the lining of mouth, throat and windpipe. Lesions are known to join together to form a false membrane which can result in suffocation.*

with some respiratory diseases or vitamin A deficiency. It has been reported that in cases of fowl pox the affected areas are firmly attached and can only be removed with difficulty, leaving an area raw and bleeding, or ulcerous. In other respiratory diseases the material is more loosely attached.

Both types of pox lesion will be evident on examination in most affected flocks, and diagnosis is simplified.

## CONTROL

Control is by vaccinating the susceptible birds with live fowl pox virus vaccine. Birds can be vaccinated as early as one day old, however it is more usual to vaccinate at four to five months of age. The vaccine is applied by the 'stick' method which involves pricking the skin of the wing web with a needle dipped in vaccine. A successful vaccination is characterised by the presence of pox-like scabs at the point of vaccination.

Bad hygiene can increase the spread of an outbreak because the virus can survive in scabs for many years, and vaccination must be repeated with each new batch.

Birds are immune on recovery and there is no evidence to suggest that these birds are carriers.

## TREATMENT

Treatment is usually of little value. When treatment is attempted, the control of secondary infections through the use of oral (soluble powder) or topical (aerosol) tetracyclines may be of limited benefit.

This leaflet was prepared by Peter Saville, Animal Health Adviser, South Pacific Commission, Suva, Fiji, from whom further information can be obtained. The photographs were provided by Solway Animal Health, Inc., 1201 Northland Drive, Mendota Heights, MN 55120-1149, USA.

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