



**PARASITISM IN DOMESTIC CHICKS (*GALLUS GALLUS DOMESTICUS*) AND
RELATED HEALTH PROBLEMS IN POULTRY**

Syeda Zainab, J.D Shaikh, Syed Atheruddin Quadri, Prashant Bangale and Mohammed Ehtesham

**Dept. of Zoology, Maulana Azad college, Aurangabad. M.S,
R.I.C. College, Jalna Dist, M.S**

ABSTRACT

Several types of interrelationship of the nature occur between organisms of different species. The interaction can be between animal and plant, or between plant and plant food, shelter is being the most important factors for the survival of organisms are become central most biological relationship between organisms. In the Majority of these relationships the interacting organisms live independently as separate entities, yet affecting each other's life in someway or the other. There are however several instances of organisms in which two or more different species living together in prolonged more or less intimately organisms in which two or more different species living together in prolonged associations more or less intimately to fulfill their needs of nutrition and Shelter.

In case of domestic chick's and poultry we may find parasitism is a kind of association ship in which two different organisms of different specie will be present in which one is called as parasite who obtains the nourishment and get shelter from the body of host (the domestic chick). In such kind of association ship the parasites is the gainer and host will be looser.

KEYWORDS: Parasitism, domestic, interrelationship, factors, entities, associationship, nourishment.

INTRODUCTION

The chicken, *Gallus gallus domesticus* is a wide spread domesticated fowl. Human keeps chickens primarily as a source of food, consuming both their meat and their eggs. Human first



domesticated chickens of Indian origin for the purpose of cockfighting. Adult male chicken over the age of 12 months are known as cocks, or roosters. Males less than a year old are called cockerels and castrated roosters are called capons. Female over a year old are known as hens and younger females as pullets. Although in the egg laying industry a pullet become a hen when she begins to lay eggs at 16 to 20 weeks of age. Chicken may live for five to ten years depending on the breed. The young ones are called as chicks and the meat is called chicken. In the deep south of the US chickens are also referred as the “yard bird”. Mostly they are present in open places, houses and poultry (Eyrinnaya.1993).

Adult roosters can be distinguished from the hen by his longer combs. Chickens are the most abundant and omnivorous bird in the wild. They often scratch at the soil to search for seeds, insects and even larger animals such as lizards, small snakes or young mice. So they become infected with different parasites which are already present in the soil (che ghani et al.,1993). So some parasites have been found in the external and internal body parts of chicken. Roosters can usually be differentiated from hens by their striking plumage of long flowing tail and shiny, pointed feathers on their necks and back which are typically of brighter, bolder colorful than those of females of the same breed. Adult chicken have a flesh crest on their heads called a comb or cockscomb and hanging flaps of skin either side under their beaks called wattles. These protuberances on the head and throats are called caruncles. Both adult male and female have wattles and combs but these are more prominent in males.

MATERIALS AND METHODS

STUDY AREA.

The study area was Nizamabad, Telangana state, INDIA. The mean maximum temperature is about 40 °C and mean minimum temperature is 20 °C (yakuba and singh 2001).

SAMPLE COLLECTION

A total of 500 chickens were collected from different locations in the study area, June to January 2011 to 2012. And chicken brought was transported to zoology laboratory euthanized alone in a killing large transparent bucket using chloroform and then examined for the presence of ecto and endoparasites.



ISOLATION AND IDENTIFICATION :

Worming Chicken and other poultry is a straight forward process, but it does help to know a little bit about the worms that are likely to infect your birds and their life-cycle so you can control and manage their numbers, minimizing the worm burden on your flock.

This article describes the most common worms that infect chicken, how you can reduce the worm burden, when you should consider worming.

Discussion

Worms and chickens

Ectoparasites are found on the outside of your chickens like lice and mites. Endoparasites on the other hand are found on the inside of your birds body and are referred to as helminthes a wide range of internal parasites or 'worms' as we commonly call them.

The most important group of worms that concern us are called Nematodes. These worms inhabit various parts of the digestive tract. Tapeworms which are a part of a group called cestodes.

This study helps to you know which worms are infecting your chickens.

The following types of worms can be found in poultry:

Hair worms- Found in the crop, oesophagus, proventriculus and intestine. Also called Capillaria.

Round worms- Found in the birds digestive system.

Gizzard worm- Found in the the gizzard.

Tapeworms- Found in the intestine.

Gapeworms- Found in the trachea and lungs.

Caecal worms- Cause little damage.

Worming chickens is important because most infection of these worms can cause damage and eventually death. So lets look at the lifecycle of these worms to understand them a bit more.

The lifecycle of poultry worms

1 Direct life-cycle: Worm eggs are expelled from an infected bird in droppings. By the thousands. These eggs sit on the ground surviving for up to a year before being picked up by birds foraging when they are feeding. Large Roundworms, gizzard worms. Hair worms and caecal worms follow a direct life-cycle. Hair worms can also follow an indirect lifecycle.

2 Indirect life-cycle: Worms eggs are expelled from an infected bird by the thousands. This can be in droppings, or in the case of gapeworm that are found in the respiratory system, coughed up. Worms eggs are not infective at this stage. Intermediate hosts,(such as earthworms, slugs, snails and centipedes) will eat these eggs and (you have guessed it) your chickens will eat these intermediate hosts and the worms eggs they have ingested and your birds become infected. The larvae hatch inside your chickens and the cycle repeats. Hair worms, Gapeworms and Tapeworms follow an indirect life-cycle although hair worms can also follow a direct lifecycle as well.

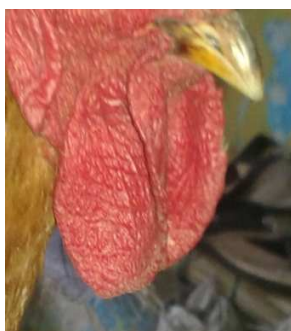
Signs and symptoms of worms

The signs and symptoms of chickens with worms are having different symptoms.

The most common symptoms are loss of weight/ poor weight gain, increased feed consumption, pale yolk colour, diarrhea and in severe cases, anaemia(pale comb and wattles)mortality and if eggs are infected then if you keep them in water then they floats on the water surface where as good eggs settles down to the bottom . In the case of gapeworm, chickens will gasp for breath or 'gape' stretching their neck. For detail see figures given below



Cock and hen



Flap below beak



Infected cockscomb and flap(a-e)(a)



(b)



(c)



(d)



(e)



Heavy ascaris infection



Boiled egg with cestode infection



A gape worm in trachea

Diagnosing worms

Getting a 'worm egg count' is the way a vet would diagnose a case of worms. It can be done by submitting some fresh droppings (from as many of your flock, try to include caecal droppings too-the yellow-brown foamy colored dropping that is expelled every 24 hours)

Damage caused by worms

The damage caused by cestode worms will be in the part of the digestive tract in which the worms live. Typically in the gut, worms cause anaemia and hemorrhaging and in sufficient numbers can impact(block) the gut. They not only damage the gut but also take nutrients and their waste releases toxins.

This photograph shows gapeworms in the trachea (the wind-pipe) of the respiratory system. This is red in colour and Y-shaped.

Looking out for worms

By hand picking method from live chickens we have to collect the ectoparasites are found on the outside of your chickens-example lice or mites. One of the things you can do in keeping an eye out for worms are to inspect droppings regularly, although unless there are large numbers of worms, there aren't always worms present in droppings. A jam jar part filled with water can be used to separate dropping by shaking and observe the content by holding it near to light.



RESULT

A Total of 500 chickens were studied all were identified as *Gallus gallus domesticus*. Parasites were found during the survey in different chickens are ectoparasites like lice and mites and endoparasites are Hair worms, Round worms, Gizzard worms, Tape worms, Gape worms, Caecal wormes. So during studies more than 90% chicks shows parasitism kind of relation ship with above shown ecto and endoparasites. According to studies all over parasite infection percentage is more then 90%.

DISCUSSION:

According to this study it revealed that chickens play important role in parasitism type of interassociation ship in which parasites causes harmful effects and diseases and utilizing them as food.

Some conditions due to which parasitic infection occur and spread are mentioned below are:

1. Worm eggs thrive in wet, warm, muddy areas. Remove muddy areas such as those found by holes by free draining gravel.
2. If conditions are dry then no development of worm eggs.
3. Worm eggs can be destroyed by ultra violet light (uv) from the sun.
4. In poultry houses always keep the litter fresh and dry.
5. Should go for regular worming.

Since the report revealed that the presence of these external and internal parasites of chickens in a developing environment like Telangana it become imperative to urgently institute control measure on these birds through massive public health education on improving the existing standard of environmental sanitary conditions. Therefore control measures should target. From human beings when they excrete its excretory material which is carrying the eggs of related parasites then these eggs get entered in to the soil and from here they will get cling to the body of chicken or infected chickens falls its dropping so along with its dropping eggs are also passed after a period of time in the environment become infective. New birds become infected by inadvertently eating these eggs while feeding drinking or scratching around their yard.



In round worms the life cycle is particularly short, being only 21 days this means that if a chicken is wormed and swallowed as infective eggs the very next day in only three weeks that chickens will have mature roundworms in its bowel again to complete eradicate. Round worms from a flock involves worming the birds every three weeks and each time following up with particularly through clean of the yard. Ongoing hygiene is important because any dropping passed prior to worming will contain worms eggs that have the potential to re infect the chickens. Often in a free range situation no matter how thoroughly one cleans., it is not possible to complete remove every piece of dropping and some infection occur in this situation regular worming is done not so much to eradicate any parasites but rather to keep them at a low level where they are not causing clinical diseases often in a yard basically clean worming every three months will provide adequate control. We have to take warm water in to which add baby shampoo and dip the chicken and remove. This is for poultry purpose. This work was therefore design to isolate and identify parasites from external surface and internal body parts of chicken (Soulsby.LJE.1982) in Telangana state, INDIA. The findings may be of immense benefit to identify the parasite bearing chickens so by proper treatment we can save our chickens from diseases. So you can control and manage their numbers, missing the worm burden on your flock. (Soulsby.LJE.1982)

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