XLIII
Convegno Annuale
Società Italiana Patologia Aviare
(S.I.P.A.)

"PARASSITOSI EMERgenti
E RiemerGENTI NEL
COMPARTO AVICOLO"

Relazioni e Comunicazioni

Forlì
7-8 ottobre 2004
3) SANCCASSANIA BERLESEI (MICHAEL, 1903): AN OPPORTUNISTIC MITE INFesting LITTERS IN POULTRY FARMS CAUSING DERMATITIS IN HUMANS AND ANIMALS

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ABSTRACT Reported herein are some cases of human dermatitis caused by S. berlesei, a mite coming from seriously infested poultry farms. It appears unable to determine traumatic lesions on human skin, but it causes itch and inflammation also at the level of mucosas. Besides this mite can be found accidentally also on reared fowls’ wounds by peak.

Key words: mite (Sanccassania berlesei), dermatitis, itch, exam of home dusts.

SANCCASSANIA BERLESEI (MICHAEL, 1903): UN ACARO OPPORTUNISTA CONTAMINANTE LA LETTIERA DI ALLEVAMENTI AVICOLI, CAUSA DI DERMATITI NELL’UOMO E NEGLI ANIMALI.

RIASSUNTO

Vengono presentati alcuni episodi di dermatite umana provocati da Sanccassania berlesei, un acaro proveniente da allevamenti avicoli fortemente infestati. Questa specie non sembra in grado di determinare lesioni traumatiche sulla cute dell’uomo, ma, piuttosto, prurito e infiammazione, soprattutto a livello delle mucose dei genitali. Questo acaro si rinvie, occasionalmente, anche nelle ferite da beccata di volatili in allevamento.

Parole chiave: acaro (Sanccassania berlesei), dermatite, prurito, esame delle polveri ambientali

Introduction

Sanccassania berlesei, better known as Caloglyphus berlesei, is an environmental mite of zootechnic interest, for it develops both in dried feedstuff and in litters of big industrial poultry farms.

The species was described morphologically in 1903 by Michael and Sanccassania genus in 1916 by Oudemans. The interest for this mite in veterinary medicine was reported for the first time in Italy by Principato et al. (1987). Besides recording the presence of that mite both in dried feedstuff and inside the farms, they described some lesions on fowls from which S. berlesei was isolated.

The hosts, where the mite was observed, were Gallus gallus, Numida meleagris, Phasianus colchicus e Turdus merula.

Crusty lesions were variously scattered on the hosts’ skin, above all in perineal areas, around the beak, but the mites were observed also on the feathers. The inflammation caused itch and in some samples, particularly infested, the symptom of diarrhea was reported as well.

Afterwards Principato et al. (1991) supplied with a S.E.M. description of adults and hypopial deutonymphs (Figure 1) of this species and in 1992 they recorded its presence in some umbrin intensive chicken farms. Nowadays, S. berlesei seems to be widespread and it is recorded everywhere, sometimes even in dwellings. Reported herein are some cases of human and animal dermatitis referred to the presence of S. berlesei.

Material and methods

The cases of dermatitis herein described were recorded through our exams of environmental dusts carried out from 2000 to 2004 in dwellings, whose owners had frequent contact with preserved farinaceous food and feedstock and besides that took care of rearing fowls, such as chickens, turkeys, pigeons and geese. A number of 76 exams of dust samples was examined, coming from those dwellings where symptoms of dermatitis were reported. A number of 49 were recorded in summer and 49 in autumn-winter. The exam was made by examining both homes dusts and the dust removed from the poultry houses. The exam was effected by flotation with a saturated solution of NaCl after filtering and precipitation in absolute alcohol.

Results and discussion

The direct exuviae observed in some fowls revealed the presence of S. berlesei in 60% of the cases reported in...
In all the cases in which *S. berlesei* was isolated in the houses, a great spread of that mite was recorded also in fowl runs with an average of mites of about n. 4000/g of dust in spring-summer and about n. 1000/g of dust in autumn-winter. The number of hypopial deutonymphs increased about at half the cycle of rearing of animals. The dermatitis observed were in most cases itchy, though not continuously. The mites were frequently isolated in clothes and in underwear and itch occurred more frequently on patients' genitals, inguinal area, arms and head. In the most serious cases it was spread also on their trunk and neck. The dermatitis observed appeared always as folliculitis complicated by scratching. Mites could be isolated from some pets' skin. On dogs the inflammation of their skin of abdomen and of the internal part of tights resulted accompanied by a strong stimulus to scratch themselves. On Passeriformes and on *Psittaciformes* the tendency of animals to pluck their feathers was evident. In chickens *S. berlesei* was present mainly inside the wounds caused by peaks, in their feathers and periocular and cloacal areas.

In general in spring-summer a higher percentage of cases of dermatitis by *S. berlesei* was reported (72%) in comparison with the autumn-winter period (28%) (Figure 3).

**Figure 3. Frequency of cases of human dermatitis caused by *S. berlesei* in spring-summer and in Autumn-Winter in people dealing with poultry houses**

Conclusions

Although the cases of human dermatitis caused by *S. berlesei* from birds are very few, it is a fact that this mites can determine itch and allergy in humans and animals. The presence of the arthropod also in underwear, with the high frequency of itch in the genital and perigenital areas appears to be interesting. *S. berlesei* is a mite that colonizes, though accidentally, animals' wounds and mucosas and its presence also in women's mucosa of vulva and vagina cannot be excluded. In this case its sanitary interest is to be correlated to the presence of bacteria of which the mite is certainly a reservoir. The possibility for this mite to transform itself in hypopis makes it possible the infestation from poultry houses to human dwellings with problems of allergy that can arise even some years after the contagion. Since *S. berlesei* is a mite present in a lot of poultry farms and it is easily adaptable to any fowl run, it is necessary to contain its number through targeted treatments of litters, in order to avoid the chance of human contagion.

A useful note for a differential diagnosis is that, contrarily to the dermatitis caused by *Glycyphagus domesticus*, the one caused by *S. berlesei* appears mainly in springtime and in summer without strophuloid lesions.

References