

## **A CASE REPORT OF SALMONELLA ENTRITIDIS ISOLATES IN CHIKEN IN IRAN**

Kargar Moakhar R. , Vand Yosefi J.  
and  
Akhavizadegan, M. A

### **Summary**

In a survey of investigation and classifying the causes of torticulis and trembling in day old chicken, it has been found that there are several factors causing nervous disturbances in day old chicken in which Salmonella enteritidis is observed and described in this case report.

### **Introduction**

Paratyphoid infection of poultry exists and is reported all over the world, (2, 4). However it has been often found that particular serotypes which were previously rare, may become increasingly common in one region or in a country. The more commonly isolated salmonella serotypes in poultry in any country are usually characteristic of that country, (7, 5, 4).

In a group of 1700 serological type motile sal., there are almost 10 serotypes which are pathologic for poultry (mostly young chicken) and hazardous for human health, among which Sal. enteritidis is counted as one of the ten serotypes, (1, 6, 3, 4).

Reports from the departments of path. and bacteriology at the State Razi Institute, during last 2 years, indicate that more than 50% of Sal. isolates from the poultry and poultry products, submitted to the lab. were Sal. enteritidis.

### **Materials & Methods**

Five breeders farms, and their hatcheries were chosen for surveying of day old chicken disorders. All day old chicken were carefully observed and those showing any clinical symptoms as well as their

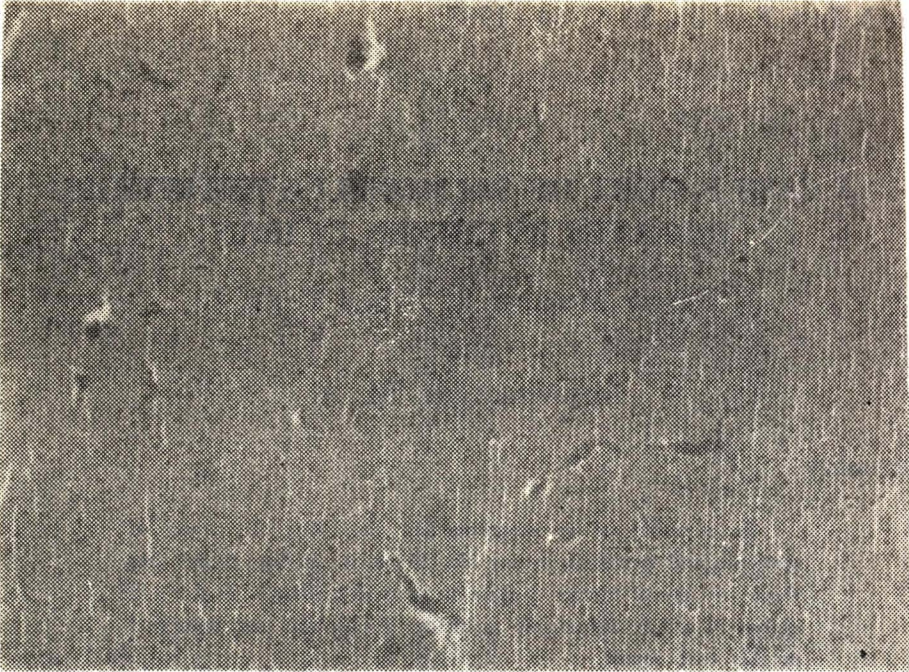


Fig. 1- Bacterial colonies in the cortex of brain section. X 60

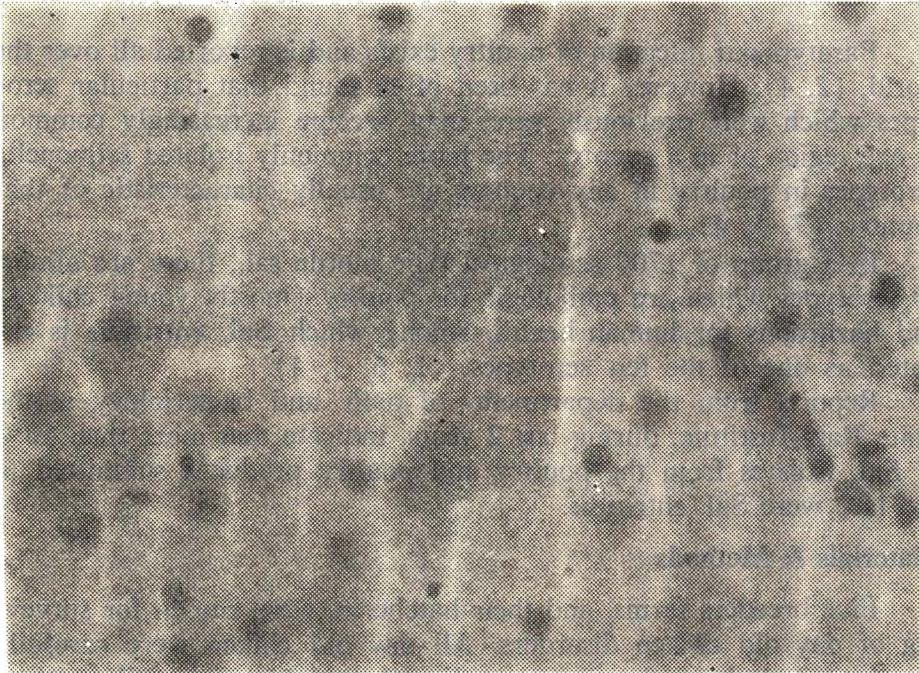


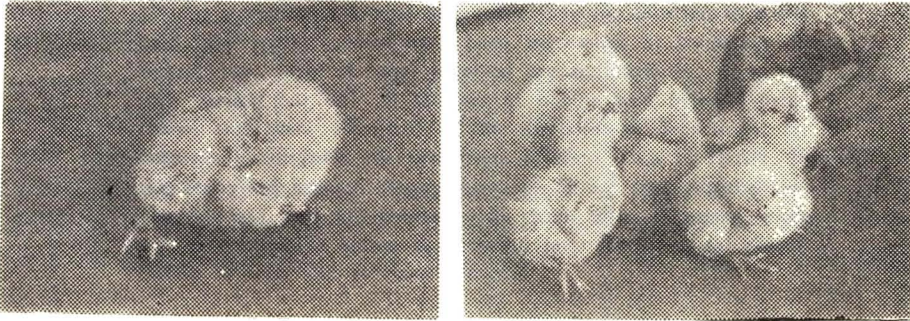
Fig. 2- A higher magnification of fig. 1. X 1250

parents were picked up and submitted to the laboratories for bacteriological, virological and histopathological studies.

## Results

From 2 out of 40 batches we found out that there were some colonies of enterobacteriaceae like organism in brain section (Fig. 1, 2). Following bacteriological investigations, serotypes of *Sal. enteritidis* could be isolated, from the brain and internal organs of the same chicken and from the ovary of the parent flock.

The clinical symptoms were torticollis and/or the head turned up from one side, (Fig. 3, 4).



Figs. 3 & 4- Day old chicken showing torticollis.

## Discussion

Since this investigation was based on finding out the cause of torticollis and trembling in day old chicken, several routine tests were tried to find out different causing agents, in which bacterial invasion (*Sal. enteritidis*) could be blamed for.

Ethiological data revealed that the breeders were healthy carriers (in spite of isolating *Sal. enteritidis* from faeces and ovaries of the parent stock, they did not show any clinical symptoms of the disease), and that the infection was transferred vertically, through the eggs.

Efforts were made to isolate the bacteria from food ingredients or drinking water, and all but only 2 cases were negative. In rare cases, workers were showing some latent infection which could supposedly be the source of infection spreading. However even though some latent Newcastle cases were identified serologically, at the time of investigation, but we could not isolate any NDV from such day old chickens, perhaps due to the presence of bacterial infection. Anyhow, further investigation is needed to clarify the definite role of *Sal. enteritidis* and its relation with Newcastle disease in day old chicken mortality.

## REFERENCES

- 1- Bierer B.W. and Eleazer T.H. 1965 Poultry Science V.44 P. 1606.
- 2- Cantor A. and Vernon H. McFarlane 1948 Poultry Science V. 27 p. 350.
- 3- Dorothy I. et al 1960 The Journal of Infectious Diseases V. 106 P. 197.
- 4- Hofstad M.S. 1978 Disease of Poultry P. 117.
- 5- Joseph N. Allred et al 1967 J AVMA V. 159 P. 1857.
- 6- Lukas G.N. et al 1954 JAVMA V. 125 P. 215.
- 7- Snoeyenbos G.H. 1971 Avian Disease V. 15 P. 28.