

# 1969年在臺灣所發生禽病之疫學考察

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## 一、緒 言

在臺灣所發生之各種禽病做有系統整理之報告尙無，筆者等從1969年1月至12月受理各地送檢材料共262件，計有476檢體，對病理解剖及病原學予以深入研討，並曾做各種疾病發生之分類，而且對主要雞病會做若干疫學發生之考察。本報告之大部份病性鑑定材料取自北部地區，雖有向隅之嫌而難謂代表全省性，但仍為可知禽病在臺灣發生之概況。

材料及方法：

病 雞：由全省各地養雞場、養雞戶供給鑑定材料。

診斷要領及依據：

臨床所見。

病理解剖檢查：主以肉眼病變檢查。

病原學的診斷：

細菌檢查：以 Trypticase soy agar, Blood agar 分離病原菌而行同定。

病毒檢查：以川村之雞腎組織培養法<sup>5)</sup> 或用雞胚胎接種法分離病毒，而後鑑定其病毒性病狀。

血清學的診斷：CRD 診斷液用加拿大 Toronto 製 Mycoplasma gallisepticum serum plate antigen Lot 19-1。

血液及糞便檢查。

## 二、成 績

自1969年1月至12月受理全省各地送檢材料共262件有476檢體，經區分以病毒性疾病、細菌性疾病、原蟲性疾病、寄生蟲病、一般病及其他不明疾病，詳細如表1。

由表成績所示，目前在臺灣最猖獗之疾病，首推新城雞瘟 (New Castle Disease)，次為馬立克病 (Marek's Disease)。其他雞腦脊髓炎 (Avian Encephalomyelitis) 亦偶而發生。在病毒性疾病之其他欄，對雞腎細胞 (CK) 有 CPE 而對雞紅血球凝集陰性之病毒疑為 Avian Reovirus 或 Adenovirus 等弱毒感染症，現進行同定試驗中。

往年在臺灣各地發生之新城雞瘟，雖未曾間斷，但自1968年11月在嘉南地區忽逞猛威而大流行，造成空前浩劫。如表2所示，以受理新城雞瘟病例為例，以4月至5月為最高潮，7~8月為低潮，9~11月有零星發生，但至11月中旬後又呈死灰復燃之勢。

受理檢體包括種雞、蛋雞、肉雞、土雞 (在來雞)、雉雞、鴿、白觀雉 (白鷓)、鴨等各種禽類共77件，內以肉雞發生最多，種雞次之。在新城雞瘟大流行期間自雉雞、鴿、白觀雉、鴨等人工飼育禽類分離病毒在本省尙屬首次。

在臺灣各地受理新城雞瘟病例有關預防接種情形詳細如表3。如表中所示，未經預防注射者共有47件 (佔 61.84%)，未經預防注射及注射次數較少之發生例佔多數。

馬立克病之發生，筆者遠在1965年於樹林肉雞場發現以5~6週齡肉雞；以神經麻痺而內臟有病變之病例；現為雞病中僅次於新城雞瘟成為後起之主要雞病。

一般發生在6週齡至6月齡，但幼齡之發生為多，神經麻痺之經過較長約1星期，排出綠色便、衰弱而死。有內臟病變者呈急性經過而斃死。

(臺灣畜衛試研報6, 51~56, 1969)

目前在臺灣所飼養之雞種均對本病有感受性，其發生病變即肝、脾、腎、卵巢、肺、腺胃、心、小腸、腸間膜、腸壁、筋胃、坐骨神經、翼神經、胰、肌肉等，而 Fabricious 囊在肉眼未發現病變。

### 三、考察及結論

在臺灣發生之禽病除較早就有發生之新城雞瘟、雞痘、雞白痢、家禽霍亂、球蟲病、白冠病、黑頭病等疾病之外，因幾年來不斷自外國輸入種雞，故1969年所檢索之病材中不少有馬立克病、雞傳染性支氣管炎、雞腦脊髓炎或疑為 Avian Reovirus 及 Adenovirus 等弱毒所引起之感染症。

雞傳染性喉頭氣管炎<sup>4)</sup>、鴨傳染性肝炎<sup>13)</sup>、康保羅病等<sup>9)</sup> 在外國有發生報告例，但筆者等之病材中未發現該等病例，嗣后擬以抗體調查究明之。

細菌性病中 CRD，傳染性可利查、葡萄球菌症、大腸桿菌症等病例均有增加之趨勢。雞白痢由政府及種雞場定期檢查，故發生率每年逐減。雞副傷寒症在臺灣亦有發生，唯筆者等病材中未具有此病例者。

微性肺炎之發生據李永基博士在談話中謂有發生病例，但筆者等未遭遇此病例。

新城雞瘟自1968年11月以降呈大流行，1969年4~5月為最高潮，7~8月為低潮，9~10月有零星發生，11月中旬以後又死灰復燃似是遍地發生。

受理檢體中以肉雞發生為最多，種雞次之，在新城雞瘟流行原因追查裏，由本成績不難發現新城雞瘟感染種雞場在感染期間亦販賣小雞為造成流行之一因，另由肉雞之短期飼養而疏忽預防注射或未預防注射之土雞感染新城雞瘟均直接、間接影響整個各地方養雞場之新城雞瘟防疫體系。

在外國報告，由人工飼育禽類鴨<sup>1,6)</sup>、雉<sup>1)</sup>、鵝<sup>1)</sup>、麻雀、孔雀<sup>1,11)</sup>、鶉<sup>1,2)</sup>、火雞<sup>10)</sup>，(Corvus evallantii japonensis bonaparte)<sup>3)</sup> 等曾分離 ND 毒。筆者等由此次 ND 大流行時由人工飼育禽類如鵝、雉、白鶩(白觀雉 Silver Pheasant)、鴨，且於1970年1月由鶩分離 ND 病毒成功。

在發生 ND 病例中發現未預防注射者有47件(佔 61.84%)，可見在臺灣對 ND 防疫漠不關心及未徹底預防而受感染者大有人在，尤其未預防注射而放飼之土雞、鴨、鵝感染新城雞瘟而散佈病毒形成流行之一因，頗值得警惕。

馬立克病近數年來變本加厲，在各地發生，其為害僅次於新城雞瘟且有凌駕之勢，且均不擇雞種，發生於幼齡雞為多，主要病變在肝、脾、腎、卵巢、肺、腺胃、心臟、小腸、腸間膜、腸壁、肌胃、坐骨神經、翼神經、胰、肌肉等。死亡率在10~60%，為今後亟待研究之主要雞病。

雞腦脊髓炎<sup>8)</sup> 及雞傳染性支氣管炎<sup>7)</sup> 均曾分離病毒及鑑定，該兩項疾病為種雞場迫切防治之疾病

此外，由 Avian Reovirus 及 Adenovirus 所引起之感染病症，現正密切注意觀察中。

### 四、誌 謝

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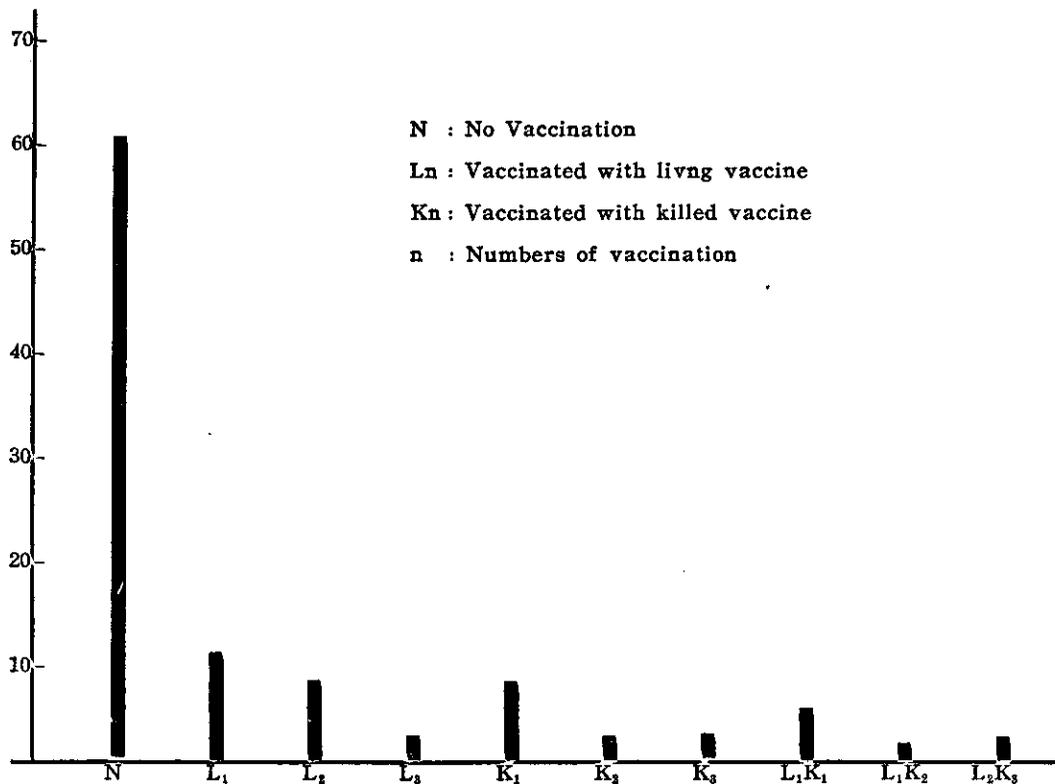
Table 1. Poultry Diseases In Taiwan For The Year 1969

Diseases	Month												Total	%	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Viral Diseases	New Castle Disease	1	4	6	2	21	7	2	2	7	2	3	10	77	2.49
	Marek's Disease	2	3	10	3	5	5	9	2	2	3	3	3	50	19.1
	Infectious Bronchitis			2	1		3		3				2	11	4.2
	Avian Encephalomyelitis			1		1				1				3	1.1
	Fowl Pox						2	1					1	4	1.5
	Others	1	2	2		2		1	2			1		11	4.2
Bacterial Diseases	Fowl Cholera	1	1	2		2		2		1	1	2		12	4.7
	C. R. D.		1	2	2	2	1			1		1	1	11	4.2
	Colibacillosis	1	2		2		1					3	2	11	4.2
	Battery Disease	1	2	1	2		1						1	8	3.1
	Infectious Coryza				2								1	3	1.1
	Pullorum Disease						1			1				2	0.8
Protozoiasis	Coccidiosis		1	1				3		1			1	7	2.7
	Leucocytozoon infection			1		2						2		5	1.9
	Histomoniasis										1			1	0.4
Parasites					1	3	2				1	2	9	3.4	
General Diseases	Visceral Gout		4	1		1	2	2	1			1		12	4.7
	Heat Stroke							3						3	1.1
	Salpingitis		1				1							2	0.8
	Encephalomalacia		1											1	0.4
	Tumor												1	1	0.4
	Others		2			3	5	1	3	1	2		1	18	6.9
Total Cases	7	24	29	24	41	31	26	13	15	8	18	26	262		

Table 2. ND Cases of The Year 1969 In Taiwan

Birds	Month												Total Cases	%
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Broiler	1	3	2	8	6	4	1		2	1	3	6	37	46.05
Breeding Chicken		1	2	2	6	1		1	3			4	20	27.63
Egg Production Chicken				1	3		1	1	1				6	7.90
Native Chicken			2		3	2			1				9	11.84
Pheasant				1	1					1			2	2.63
Pigeon													1	1.32
Silver Pheasant					1								1	1.32
Duck					1								1	1.32
Total Cases	1	4	6	12	21	7	2	2	7	2	3	10	77	

Table 3. Observation of ND Vaccination In Occurring Flocks



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Report of Poultry Diseases Diagnosed at the Poultry Diseases Service Center  
for the Year 1969

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English Summary

Among the poultry diseases in Taiwan, the Newcastle disease (ND), avian pox, pullorum disease, fowl cholera, coccidiosis, leukocytozoon infection, and histomoniasis have commonly noted for many years. Since the importation of breeding chickens from the other countries, the authors have observed some new diseases such as Marek's disease, infectious bronchitis, avian encephalomyelitis, and some suspected cases of avian reovirus or/and adenovirus infection.

Some other poultry diseases, such as infectious laryngotrachitis, infectious hepatitis of ducks, and gumboro disease, have been described by researchers in the other countries, but never observed in this island. For making sure whether these diseases were existing in the island, the authors were carried out an antibody investigation.

In the bacterial diseases, the authors noted that the cases of CRD, infectious coryza, staphylococcosis, and colibacillosis seemed to increase gradually in this country. But the cases of pullorum disease have decreased sharply since agglutination test was taken periodically. Paratyphoid infection had been noted in this country, but not observed from the cases sent here.

From the unpublished data of Dr. Y.C. Lee, Professor of National Taiwan University, we could see the occurrence of aspergillosis in this island. But the authors have not found it among the chickens diagnosed here.

During 1969, the authors observed an outbreak of ND in April-May, low morbidity in July-August, sporadic occurrence in September-October, and re-outbreak after the middle of November. It was obvious that ND was distributed all over the island. Among the cases diagnosed here, most of them were broilers then breeding chickens. The main reason of the ND outbreak was the selling of chicks from the occurring flocks, the other was no vaccination of broilers and native chickens.

From the papers reported by many other researchers, it was known that NDV had been isolated from ducks, pheasants, pigeons, sparrows, peacocks, quails, turkeys, and *Corvus leuillanti Japonensis Bonaparte*. The authors also isolated NDV strains from cases of pigeons, pheasants, silver pheasants, and ducks in the outbreak of the year 1969, and isolated a strain of NDV from goose in January, 1970.

Among the 77 cases of ND in 1969, 47 cases (61.84%) were no vaccination. So it was noted that many of the farmers still paid little attention to the ND vaccination. And it was obvious that no vaccination of native chickens, ducks, and geese were one of the main sources of NDV distribution.

The morbidity of Marek's disease in this island was greatly increasing recently. Besides ND, Marek's disease was the most important poultry disease in this country. It occurred in all breeding lines of chickens. The typical pathological findings were mainly found at liver, spleen, kidney, ovary, lung, proventricle, heart, small intestine, mesentery, gizzard, sciatic nerve, pterygoid nerve and muscle. Its mortality was 10-60%. So that it shall be the disease we have to pay more attention to.

The authors also have isolated AEV and IBV from the cases diagnosed here, and been characterizing them now. These two diseases were the main problem met in breeding flocks.

The authors also paid much attention to the avian reovirus and adenovirus infections.