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SHORT COMMUNICATION (I)

Cases submitted for Postmortem Examination to Universiti Pertanian Malaysia in 1977

RINGKASAN

Satu kajian telah dibuat di atas kes-kes yang diterima untuk pemeriksaan posmortem oleh Jabatan Pathologi dan Mikrobiologi Veterinar, Universiti Pertanian dalam tahun 1977. Sebanyak 1413 kes telah diterima terdiri dari 13 spesis haiwan. Data tentang penyakit-penyakit yang diketemui dibentangkan dan dibincang dengan ringkas.

INTRODUCTION

The Department of Veterinary Pathology and Microbiology, Faculty of Veterinary Medicine and Animal Sciences, Universiti Pertanian Malaysia (UPM), started receiving animal carcasses and tissues for teaching and diagnostic purposes in 1975. This marked the start of the teaching of the Veterinary Pathology course for the Doctor of Veterinary Medicine (DVM) programme in the 1975/1976 session. This is a report on cases received in the calendar year 1977.

MATERIALS AND METHODS

All cases received for postmortem examination by the Department of Veterinary Pathology and Microbiology in 1977 were studied. The livestock carcasses came from UPM, MARDI and several neighbouring private farms, while dog and cat carcasses were submitted by the SPCA and private owners. Tissues submitted comprised either materials condemned at slaughter from the Shah Alam abattoir or biopsies performed routinely by DVM students.

Most of the diagnoses made on the cases were based on gross pathological findings only. Routine microbiological and histological studies were limited to a small proportion of cases only since the respective laboratories were not fully equipped for diagnostic purposes. In view of this, the study only attempts to arrive at conclusions on the common diseases and conditions seen in the various species of animals received. No attempts were made to enumerate the actual number of animals involved in the various diseases.

RESULTS AND DISCUSSION

A total of 1413 cases were received for postmortem examination in 1977, comprising 12 different species of animals (Table 1). The total number of carcasses was actually in excess of the figure because of multiple submissions in many cases. The monthly distribution (Figure 1) reflects clearly the teaching activity of the Pathology Unit of the Department of Veterinary Pathology and Microbiology. The number of

TABLE 1

Species Distribution of Cases Submitted

Species	Whole Carcass	Tissues	Total
Avian	640	1	641
Bovine	105	83	188
Caprine	39	9	48
Ovine	29	14	43
Porcine	47	72	119
Canine	87	150	237
Feline	20	48	68
Equine	7	1	8
Mousedeer *(T. javanicus)*	1	1	2
Primate *(Macaca* sp.*)*	3	0	3
Murine	1	54	55
Guinea Pig	1	0	1
TOTAL	980	433	1413

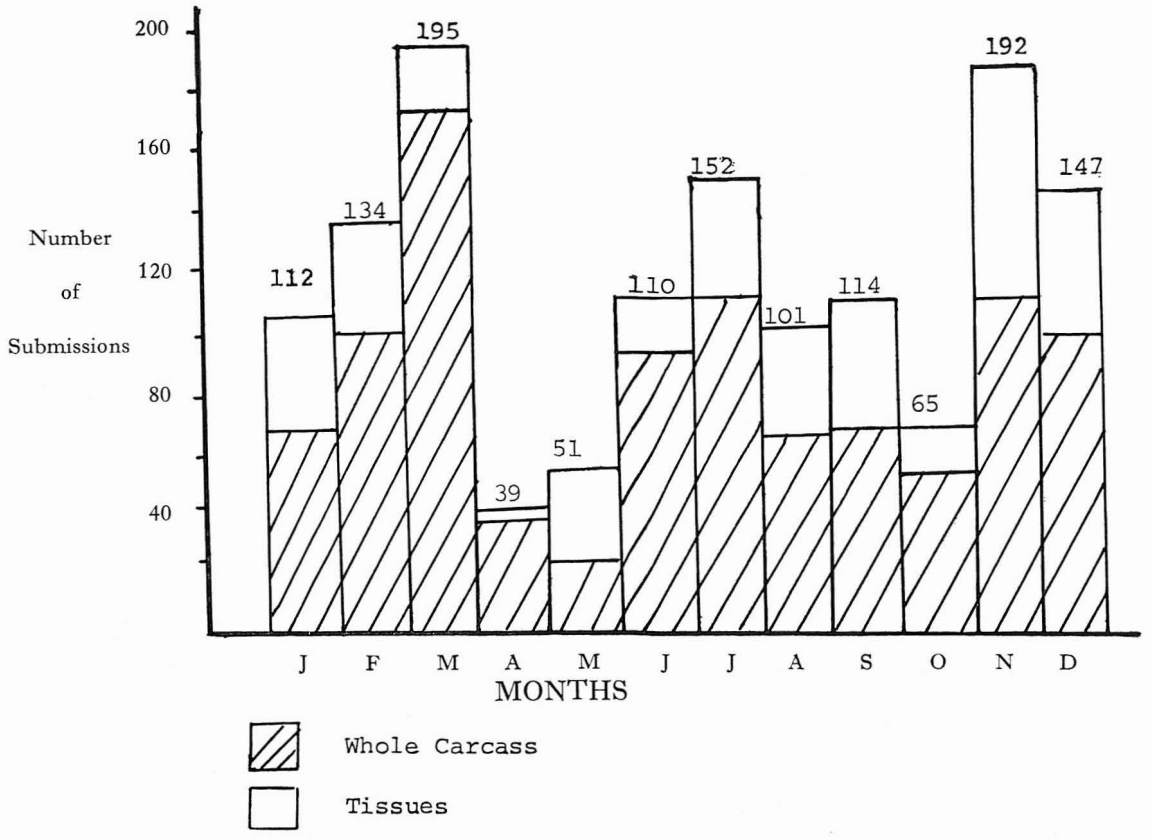

Fig. 1. Monthly Distribution of Cases Submitted.

cases was low during the long vacation in the months of April and May and during the inter-semester break in October. The submissions of bovine, ovine and porcine tissues from the Shah Alam abattoir as well as canine and feline biopsied tissues during these periods, were either entirely nil or very low. The total number of submissions in March and November was high. The high count in March was due to assigning a pathology number to each individual bird rather than to a batch of birds submitted from the same flock; in November there was a large number of murine tissues submitted for histopathological studies.

Avian cases

The common diseases seen are shown in Table 2. Leucocytozoonosis was the most common disease. It affected birds between the ages of 6-8 weeks causing a mortality rate of between 5-10% per flock. Newcastle Disease occurs in sporadic outbreaks in certain flocks perhaps due to vaccination breakdowns.

TABLE 2

Avian: The common diagnoses listed according to estimated frequency

1.	Leucocytozoonosis
2.	Coccidiosis
3.	Air sacculitis
4.	Colibacillosis
5.	Leucosis
6.	Marek's Disease
7.	Nephrosis
8.	Starvation
9.	Visceral gout
10.	Newcastle Disease
11.	Cannibalism

Bovine cases

Table 3 shows the common diagnoses made in ruminant carcasses including bovine. Mohd. Anwar (1977) gives a more comprehensive list of cattle diseases found in Malaysia. With the exception of Bovine Malignant Catarrh (BMC) most of the other diseases involved single animals

and were observed either once or at the most only in several cases. BMC was seen in 29 dead cattle submitted from a research station and has been reported elsewhere (Vanselow, 1977). Oxalate nephrosis occurred in several cattle that had been grazing on *Setaria splendida* for a few days. Of the abattoir specimens, the majority consisted of livers with *Fasciola gigantica* and *Gigantocotyle explanatum* infections, hepatic abscessations, pulmonary abscessations, chronic proliferative pericarditis and aortas with the parasite *Eleophora poeli.*

Caprine and ovine cases

The common diagnoses made on carcasses are also listed in Table 3. Starvation/malnutrition and internal parasitism were the most common findings. Caprine tissues comprised mainly biopsies of normal uteruses and ovaries while ovine tissues were mainly abattoir specimens, the majority of which were lungs and mediastinal lymph nodes with caseous abscessations caused by *Corynebacterium ovis.*

Porcine cases

The tissues consisted mainly of abattoir specimens. The common diseases and conditions seen are shown in Table 4. The occurrence of melioidosis was of significance because of its zoonotic behaviour.

Canine and feline cases

The common diseases and conditions seen are listed in Table 5. Dirofilariasis was a common problem in dogs consistent with the finding of a recent survey which showed an incidence of 25.8% among 764 dogs (Retnasabapathy and Khoo, 1976). Among cats, panleukopenia is a common problem. The tissues submitted in both species were normal uteruses ovaries, testes, kidney, spleen and intestines removed by DVM students at surgical exercise.

Equine cases

Six of the 7 carcasses came from the UPM Horse Unit, most of which showed inguinal edema and meningoencephalitis suggestive of trypanosomiasis (Surra) and corroborated by the clinicopathologic studies (Ng and Vanselow, 1979; Seiler *et al,* 1980). One of these horses also had salmonellosis. The horse submitted from outside UPM had focal encephalomalacia of the brain stem.

TABLE 3

Ruminants: The common diagnoses in carcasses

Bovine	Caprine	Ovine
1. Bovine malignant catarrh	1. Starvation/malnutrition	1. Hemonchosis
2. Starvation/malnutrition	2. Internal parasitism (hemonchosis & coccidiosis)	2. Starvation/malnutrition
3. Internal parasitism (mainly hemonchosis)	3. External parasitism (lice and mites)	3. Pregnancy toxaemia
4. Oxalate nephrosis	4. Bronchopneumonia	4. Enterotoxaemia
5. Babesiosis	5. Enterotoxaemia	5. Suspected plant poisonings
6. Pneumonia (mainly aspiration)	6. Contagious ecthyma	
7. Abortion (unestablished aetiology)		
8. Stillbirth		
9. Dystocia		
10. Brucellosis		
11. Haemorrhagic septicaemia		

TABLE 4

Porcine: The common diagnoses

Whole Carcass	Abattoir Specimen
1. Abscessation (various organs)	1. Chronic Interstitial Nephritis
2. Enteritis (salmonellosis & colibacillosis)	2. Hydronephrosis
3. Pneumonia	3. Renal cysts
4. Septicemia *(E. coli)*	4. Abscessation (mainly liver)
5. Aujesky's Disease	5. Pneumonia
6. Erysipelas	6. Embryonal nephroblastoma
7. Melioidosis	

TABLE 5

Canine and Feline: The common diagnoses in carcasses

Canine	Feline
1. Dirofilariasis	1. Infectious Feline Enteritis (Panleukopenia)
2. Parasitism – spirocercosis – hookworms	2. Chronic Interstitial Nephritis
3. Distemper – Bronchopneumonia – Encephalitis	3. Cystitis
4. Parasitic dermatitis – demodectic mange	4. Diaphragmatic hernia
5. Tumours – Transmissible Venereal tumour – Lymphosarcoma – Hemangiosarcoma	5. Squamous cell carcinoma 6. Necrotising dermatitis
6. Tropical pancytopenia (Ehrlichosis)	

CONCLUSION

The data presented indicate the animal diseases present in Malaysia or, at least, in Selangor. However, it is too biased and selective to allow for a detailed epidemiological study on the various diseases observed. Submission of cases was determined by various factors such as the level of teaching activity, geography, transportation and also the availability of sources.

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