



UNIVERSITI PUTRA MALAYSIA

**MANAGEMENT AND PROBLEMS OF WORKING DOGS IN THE
POLICE AND CUSTOMS KENNELS**

PETER LEE AH KONG

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MANAGEMENT AND PROBLEMS OF WORKING DOGS

IN THE POLICE AND CUSTOMS KENNELS

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by

PETER LEE AH KONG

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For my parents;
whose love, patience and understanding
I can never hope to repay



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ABSTRACT

A survey on the management and problems of working dogs in the Police and Customs kennels was carried out. Interviews based on a set of questionnaires were made besides personal observations. A retrospective study was also carried out on the medical records of the working dogs.

The most common disease problems encountered in the working dogs are ancylostomiasis, tick infestation, fungal infection, diarrhea, otitis externa, hip dysplasia and lameness.

Fecal samples taken three days before deworming showed that 85.7% of all Police dogs in Kuala Lumpur station and 95.2% of all Customs dogs were positive for hookworm. From this study it was also found that the Customs kennel has a serious problem of fungal infection.

The crime dogs apparently had more eye problems than the narcotic dogs.

Other non-disease problems are also discussed in this study which include behavioural, kennel management, training and service constraints. Recommendations were made.

TABLE OF CONTENTS

	page
1. Title page	i
2. Dedication	ii
3. Acknowledgement	iii
4. Abstract	iv
5. Table of contents	v
6. Introduction	1
7. Literature review	2
8. Materials and Methods	3
9. Results	4
10. Discussions and recommendations	11
11. Conclusions	17
12. References	18
13. Appendix	a-c

INTRODUCTION

Dogs are kept mainly as companion animals. However in many countries, dogs have been used as combat dogs, sentry dogs and patrol dogs. In Malaysia, the dog unit in the Royal Malaysian Police was started in June 1968 with 6 Alsatian dogs. Today there are 63 dogs of which 47 are general purpose (crime) dogs and the rest narcotic (dadah or drug detector) dogs stationed through out Malaysia.

The dog unit of the Royal Customs and Excise Department was started in 1978 with only 2 Labrador dogs as part of the special squad team. In 1980, the narcotic section was established and the dog unit was then included under this section as it is now. The Customs dogs are all donations from government of U.S.A., Germany and Australia.

The functions of the general purpose dogs of the Royal Malaysian Police are numerous. This includes:

1. Tracking of criminals and missing persons
2. Raids on suspected criminal areas
3. Crowd control
4. Guard and control
5. Chase and arrest of suspects

Among the functions of the narcotic dogs in drug detection are:

1. Routine check on luggage, baggage, cargo in airports and ports
2. Checking of baggage and vehicles at border stations
3. Road blocks and surprise check on vehicles
4. Search of house suspected to have narcotic drugs

5. Routine check on parcels and packages in the post offices
6. Surprise check of buses in the bus terminals and trains at station

The effectiveness of the working dogs are, in great part, a function of the management and health of the individual dog. Dogs brought in from temperate countries and exposed to a tropical climate in Malaysia are subjected to new external factors which may interfere with their proper utilization. Therefore the knowledge of the proper management and problems or constraints encountered, may it be disease problems, handling or training problems or any other problems, are essential not only to the veterinarian but also to the officers who utilise these dogs in their investigations. The present study was conducted in the Police and Customs dog units with the following objectives:

1. To study and compare the management of the working dogs in the Police and Customs kennels
2. To evaluate the performance of the working dogs
3. To study the prevalence of the common disease problems encountered in the working dogs
4. To make recommendations if any on the management of the working dogs.

LITERATURE REVIEW

Training

The theory of training and the practical training system of general purpose (crime) dog has been described (9). The first step of training is important for the handler to establish a good

relationship with the animal through constant close association which includes feeding, grooming, exercise and play (9,13).

Nutrition

The nutritional requirements of dogs have been determined and stated with some precision since 1966 (10). The National Research Council recommends optimal requirement for the food energy and for the 26 known essential nutrients. These are proteins, fat, unsaturated fatty acids, 11 minerals and 12 vitamins. Working dogs have a consistently higher energy requirement than sedentary or pet dogs in a maintenance status (2).

Disease problems

Medical problems in military working dogs has been described in several reports (6,11,12,15). Hip dysplasia was a serious problem in the selection of German Shepherd dogs for military duties (11). A wide spectrum of clinical disease entities was reported in working dogs in Vietnam (6).

MATERIALS AND METHODS

Period of study

This survey was carried out in May, 1984. A retrospective study of the medical records from January 1981 to May 1984 in the Police dog unit and from January 1982 to May 1984 in the Customs dog unit were also carried out in this survey.

Area of Study

The dog unit of the Malaysian Police Department in Kuala Lumpur is located within the compound of the Police Training

Centre at Jalan Gurney, whereas the dog unit of the Royal Malaysian Customs and Excise Department is located at Jalan Bellamy.

Methods of study

Interviews based on a set of questionnaires were made to the officer in charge of the dog unit. Information regarding disease problems was obtained from medical records of the individual animal. Personal observations of the management were made. Fecal and blood samples were also taken during the survey to evaluate the deworming program and the prophylactic program against heartworm respectively.

RESULTS

Record keeping

Both the Police and Customs dog unit kept the same kind of records. The dogs are identified by Malaysian names. These dogs are mostly German Shepherd and Labradors. Each dog has their own individual file and a medical (health) record. The report on training and success cases are included in the individual file.

Medical treatment

Prior to 1981, the Police and Customs dogs in Kuala Lumpur were treated in the Petaling Jaya Government Veterinary Clinic. Dogs based out of Kuala Lumpur were treated at the nearest government veterinary clinic. From 1981 the Police and Customs in Kuala Lumpur and some nearer stations referred cases to the Veterinary Clinic of Universiti Pertanian Malaysia.

Vaccination

The dogs are routinely vaccinated with Distemper, Adenovirus

type 2, parainfluenza, leptospira and canine parvovirus vaccines annually at Universiti Pertanian Malaysia.

Deworming

The police dogs are dewormed monthly with mebendazole at the dose of 20 mg/kg body weight for three days, while the Customs dogs are dewormed twice annually at the same dosage.

Deticking

The Police and Customs dogs are bathed every week with dog shampoo and dipped in Asuntol after that.

Feeding

Both the Police and the Customs dogs are fed with dry (biscuit and moist (Canned) food. They are fed in accordance to the manufacturer's recommendations. The Police dogs are fed at 3.00 p.m. daily. They are also given daily 3 tablets of Diethylcarbamazine 50 mg tablet as a prophylaxis against heartworm and one Tetracycline 250mg capsule as prophylaxis against Tropical Canine Pancytopenia. The Customs dogs are fed at 11.00 a.m., given 6 tablets of vitamins (Canovel) daily and 2-3 tablespoonfuls of corn oil. Diethylcarbamazine 50mg tablets were also given at 4-12 tablets daily depending on the body weight of the dogs.

Training of dogs

Dogs that are selected need to undergo training for a certain period depending on the nature of their work. They should also pass the evaluation test at the end of the specified training period. Training for all Police dogs were conducted in the Police dog unit itself. For the Customs dogs, they have been trained in the country of

origin. After the first step where the handler has established a good relationship with the animal through a constant close association, basic obedience training begins for the animal. The training is a gradual process.

Basically, both the crime and narcotic dogs undergo the following stages of training namely:

1. Obedience training
2. Discrimination of scent
3. Tracking
4. Clearing of obstacles
5. Combat conditioning
6. Chase and arrest (crime dogs only)

Obedience training techniques are not significantly different from those used by civilian trainers for personal pets except that a working dog's training never stops. Patience by the dog handler is the most important tool in the training. The handler must be patient but firm and used constant repetitions as well as reward and correction to train a dog. The trainer must never lose patience and become angry or irritated because the dog will get confused and be even more difficult to train. Because dogs do not understand 'right or wrong' by human standards, the desired response is communicated through reward and correction. When the animal responds correctly it is rewarded with verbal praise, physical petting and play articles. If a wrong response is made the reward is withheld. For most dogs, a firm 'no' and a jerk on the leash is sufficient correction for incorrect responses. This is the only form of correction applied;

inflicting pain is detrimental to training. After the basic training a dog enters advanced training.

Duration of work

a. Police dogs

Police dogs work for 48 hours per week. This will vary if the handler is on leave or not, if other dogs are available and the condition of the dog itself. At any time the dogs work in a team of two. Under normal working conditions, the dog can work for 30-45 minutes without stopping. This is independent of the distance covered. During hot weather, one dog is usually allowed to work for 15-20 minutes and then rested while the other dog carries on the work. The average working life of a working dog is 6-8 years but some have reach 11 years. Some may only work for 1 or 2 years and then have to be euthanized due to serious medical problems or accidents. The dogs are at their best at the age of 3-6 years. There is no difference in the working capabilities of the spayed or castrated dogs as compared to the intact animals.

b. Customs dogs

Each dog has its own handler and the working hours will depend on the handler's duty. This also applies to the Police dogs. Each dog is allowed to work until it refuses, where the handler will let the dog rest and let another dog to take over. They also work in a team of two.

Generally, the ability of the working dogs to detect drugs is independent of the age.

Daily routine

a. Police dog unit

After the roll call at 8.00 a.m., the handlers will take their dogs out for urination and defecation, then tie the dogs outside the kennels while the handlers clean their respective kennels. The dogs are groomed and the body condition checked every day. Training such as obedience training and tracking will also be carried out as well as some physical exercises. The dogs are fed at 3.00 p.m., half an hour later any remaining feed is discarded and the feeding bowl is washed and filled with water. The handlers still have to attend to their dogs during public holidays.

b. Customs dogs

At 8.00 a.m. the handlers take their dogs out for a walk for about 45 minutes. Then they put their dogs through light exercise such as obstacle jumps and sniffing practice for a further 45-60 minutes. Washing of the kennels will be done at 8.30 a.m. by the kennelman. For those dogs that are not taken out by their handlers, the kennelman have to take them out either to the training ground or put them into the portable kennel when cleaning the kennels. Feeding is at 11.00 a.m. In the evening before going home the handlers will take their dogs out to defecate and urinate.

Contingency plan

a. Police dog unit

The plan of the dog unit is to have about 200 dogs (crime and narcotic) stationed through out Malaysia. At present there is still shortage of dogs.

The daily work plan is as follows:

1. Airport duties - routine work for narcotic dogs
2. First standby team - routine security patrol at Bukit Aman starting from 6.00 a.m. and attends to calls from ground officers around that area.
3. Second standby team - security patrol at the Police Remand Centre (detention camp) from 10.00 p.m. to 6.00 a.m. This team will have to attend to calls after 6.00 a.m. if the first standby is out on call.
4. Third standby team - security patrol at the Klang district starting from 6.00 p.m. to 6.00 a.m. and attends to call from or around Banting area.

b. Customs dogs

The number of dogs in this unit is small compared to the work load. However there is no plan yet to increase the number of dogs since the Customs depends on donations.

Housing

The permanent kennels of both the Police and Customs dog unit were of asbestos roof and ceiling, cement floor and tiled walls. The dogs are housed individually. There are also portable kennels which are used for transporting dogs from one place to another. In the Police dog unit these kennels can be disassembled and made of iron bars and wire nettings. In the Customs dog unit it is made of fibre glass.

Disease problems (refer to appendix)

By far the most persistent endoparasitism encountered in the Police kennel was ancylostomiasis. From the survey, for 1981, 38.3%

of the crime dogs from Kuala Lumpur station and 33.3% from out-station dogs recorded had fecal examination results positive for hookworm at least once during the one year period. The narcotic dogs are less affected. In the Customs kennel, ancylostomiasis and ticks were the major parasites encountered.

In contrast to the hookworm problem, both the Police and the Customs dogs, ova of other internal parasites such as Trichuris, Toxocara, Giardia, Spirometra, Spirocerca and Strongyloides were rarely found.

Fleas, ticks, sarcoptic and demodectic mange were the common ectoparasites encountered in the working dogs. Superficial fungal infections were mostly Microsporium spp. Deep fungal infections were mostly of Aspergillus spp. This is a serious problem in the Customs kennel. Dermatitis, pruritis, cuts and wounds of all types were the main skin problems encountered in the Police kennel. The skin problems of the Customs dogs were similar except for cuts and wounds. Other minor skin and subcutaneous tissues problems were sporadically encountered and of not much significance in relation to the work of the dogs.

Otitis externa was the most common problem of the ear. Besides that, hematomas, otitis media and waxy ears were also recorded but these were only sporadic.

From the survey, hip dysplasia was a major problem of the musculoskeletal system in the crime dogs. In the narcotic dogs the problem was less frequently encountered. In 1981, 50% of the out-station Police crime dogs and 46.2% of the crime dogs from Kuala

Lumpur station were diagnosed with this problem. The problem has drastically reduced since then. There was no record of hip dysplasia in the Customs kennel from 1981 to 1984. Besides hip dysplasia, other common problem was lameness. In 1983, 42.9% of the Police crime dogs from Kuala Lumpur station, and 16.7% and 15.0% of the outstations Police crime dogs were affected in 1981 and 1982 respectively.

Sporadic cases of tracheitis, pneumonia, infection and cough were recorded. However this conditions rarely reach severe proportion

Various disturbances of the digestive system affecting working dogs were recorded. Diarrhea due to ancylostomiasis and other endoparasites were the most frequent disturbances of the digestive tract. From this survey, in 1981, 23.1% and 42.9% of the crime and narcotic dogs from the Police kennel in Kuala Lumpur were affected respectively and 33.3% of the Police crime dogs from outstations were affected. However the problems seems to be not significant at present.

Urinary tract problems were not a major problem affecting the working dogs. Cystitis was the major condition in this category.

DISCUSSIONS AND RECOMMENDATIONS

Disease problems

The problem of hookworm infection was noticed in many of the working dogs. During the survey, fecal samples were taken and examined for endoparasites by the simple flotation technique three days before deworming. It was found that 85.7% of all the Police dogs in Kuala Lumpur station and 95.2% of all dogs in the Customs kennel has positive result for hookworm and 13.3% was positive for

strongyloides.

In the Police kennel, fecal samples were also taken for examination a day after the last dose of mebendazole treatment and that all the fecal samples were negatives for endoparasites. Therefore the problem does not lie on the deworming program but re-infection from the environment. The moist sandy ground around the kennel may serve as a reservoir for the hookworm. Reinfection is via ingestion of the infective larva or ova. To overcome this problem, the handler should minimize dogs' exposure to the sandy soil especially so in the morning. Since it is quite impossible, another alternative is to apply lime to the sandy soil so as to render the soil unsuitable for the infective larva to survive and the ova to hatch. Further studies should be carried out. Reinfection can also be acquired when dogs are out to work especially so in the case of crime dogs.

In the Customs kennel, the problem of endoparasitism lies in the deworming program itself. Deworming should be more frequent rather than only twice a year. Infection in this case can also be acquired from the training ground when the dogs are kept there during exercise and when washing the kennels.

Although rarely did endoparasitism interfere with the mission of the dogs, some dogs are kept out from work for a few days for treatment of hookworm.

The problems of ectoparasites, skin and the ears merely reflect the degree of handlers' individual attention to the dogs. The higher the degree of individual attention the lesser will be

the problems. These problems can be markedly be reduced with constant grooming and checking of the animals. The kennels must be dry before putting the dogs back as otherwise this will cause the skin of the animals to be moist and predispose to skin problems especially so with fungal infection as encountered in the Customs kennel. A mean loss time from the field of 5.4 days per dog was due to infective parasites such as demodectic and sarcoptic mange and ringworm in the military dogs (6).

Rarely was a dog with clinical signs of heartworm disease presented for treatment. From the study, only one dog from the Police kennel and one from the Customs kennel shows positive Knotts test for Dirofilaria immitis microfilariae. This problem causes the dog to be out of duty for several weeks for the treatment. This problem may have arisen because the prophylactic treatment given was not actually taken by the dog especially if the feed was not finished by the dog since the drug is given in the feed. To overcome this, the handlers can give the drugs directly i.e. into the dog's mouth. If unable to do so then the drug can be mixed with some soft food to make sure the dog ate it and given before the actual amount of food to be given. However the prophylactic measures on the whole is successful in controlling the heartworm problem.

Crime dogs apparently had more eye problems. Dust, heavy vegetation and daytime duty undoubtedly contributed to the higher prevalence of the problems. This findings are consistent as reported (6).

In the dogs, the development of hip dysplasia is influenced

by genetic, hormonal and other prenatal and postnatal factors (3,15). Abnormal stresses on certain parts of the joints during training leads to secondary degenerative changes (14). Spasms of the pectineus muscle may place undue pressure in the dorsal aspect of the acetabulum and enhance faulty joint development (1,15). Normal hip joints will undergo less deterioration than those classified under grade 1,2 and 3 (15). Therefore to minimize the problem of hip dysplasia, it is best to purchase dogs with normal or near normal hip joints. The higher prevalence of hip dysplasia in the crime dogs probably reflect the nature of the work of the animals and the vigorous physical training especially in the obstacle clearing and combat conditioning. This also applies to other problems of the musculoskeletal system and the skin such as lameness, soft tissue injury, puncture wounds and abrasions. A mean loss of 6.2 days for cuts and wounds of all types in military scout dogs, and 2.7 days per dog in sentry dogs were reported (6).

Other diseases that are sporadically recorded do not pose a problem in the majority of working dogs but do cause loss of working hours in the field due to time loss in treatment.

Kennel management

From the study, the following were observed:

a. Police kennel

1. The floor of the kennel was level
2. Kennel has inadequate ventilation
3. Some of the wooden doors are in poor condition
4. The roof of the kennel was too low

b. Customs kennel

1. Poor ventilation of the kennel
2. Dogs are usually put back into still wet kennels
3. The slope of the floor was the same as in the Police kennel
4. Dogs stood up against the wall and bark at each other
5. The mosquito netting on the doors and walls reduce ventilation

In future the floor of the kennel should be built slightly sloping so that water run off easily and hence the floor dries faster. It should also be mopped and let to dry before the dogs are allowed back in. To improve the ventilation, the rear portion of the kennel should be of iron bars and the roof higher. The mosquito netting in the Customs kennel should be removed to facilitate ventilation. The walls in between kennels of the Customs should be concrete through out so that dogs can not stand up and bark at each other. This may be injurious to the hip due to undue pressure and slipping on the floor.

Behavioural problems

Some of the Police and Customs dogs are not very obedient and refused commands as observed in the clinics. In my opinion the obedience can be improved through constant training. In cases where dogs are too fierce to be handled, the initial selection of the dog was wrong and more care should be exercised regarding temperament of the dogs in future.

Nutrition

Since the Police and Customs dogs are fed with well balanced commercial diet and fed according to the manufacturers' recommen-

dations, problems due to nutrition did not arise. However from the survey, there are cases reported of weight loss due to unknown causes and this could be due to the dog being underfed after heavy exercise or work. Basically, the dog should get more in terms of energy requirements after exercise or work. For light, medium and heavy exercise or work, the dogs should be fed one and a half, twice, and two and a half times the maintenance requirement respectively (7). Work efficiency is not improved by feeding immediately prior to exercise or work. It is probably best to give $\frac{1}{4}$ of the total daily meal 2-3 hours before work, and the remaining $\frac{3}{4}$ following a rest after work or exercise (7). A constant supply of water during work is essential for best performances.

Training

The training of the working dogs should be a continuous one, even for experience dogs. Proficiency training is a must. Dogs that go 30 or more days without a workout often require complete retraining (13). The problem of heat stroke arises due to hot humid climate. To overcome this, it is best that the dogs are trained in the morning. Training facilities especially proper training ground are lacking. With proper facilities, physical injuries during training can be reduced especially in the combat conditioning and tracking.

Service constraints

The dog unit does not work entirely on its own and their work also depends on calls from the ground officers. The problem here is that the dogs may at times be underutilized due to the reluctance of the officers to call in dogs to help.

At the state or district level, there is the problem of the veterinarians who are reluctant to refer the case to other clinics like the veterinary hospital in Universiti Pertanian even though they do not have the facilities for diagnosis or drugs for treatment. This results in the dog becoming very ill and sometimes result in death from various reasons.

The climate itself is another problem to the working dogs. On a hot day, the track or scent laid by the suspect tends to disappear faster and this causes a problem for the dog to detect the scent (9). So the investigating officer who needs help from the dog unit should call in immediately. The problem of crowds also causes a problem for the dog to detect the real scent of the criminal(s).

In view of the increasing number of the working dogs, it is recommended that the working dog units should have a veterinarian to take charge so that close supervision of the dogs can be made and that round the clock service is not a problem.

The command and control of the dogs is difficult to evaluate since there is no standard to compare with but from observations in the Universiti Pertanian clinic, I think it can be improved. However during criminal operations, the dog units have an impressive record of combating or preventing crime.

Conclusions

From the study, some current problems have been highlighted and recommendations made to increase the efficiency of the dogs so that the man-hours spent to train and maintain the dogs are more worthwhile.

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(a)

APPENDIX

RESULTS ON THE RETROSPECTIVE STUDY OF THE DISEASE PROBLEMS

YEAR	1981			1982			1983			1984		
	A	B	C	A	B	C	A	B	C	A	B	C
NUMBER OF DOGS	13	7		14	7	13	14	7	21	14	7	22
	%	%	%	%	%	%	%	%	%	%	%	%
DISEASE PROBLEMS												
1. ECTOPARASITES												
a. ticks	7.7			21.4	14.3	15.4	14.3		14.3			9.1
b. fleas				14.3								
c. sarcoptic mange	7.7			7.1	14.3	7.7			9.5			4.5
d. demodectic mange				7.1		15.4						
2. ENDOPARASITES												
a. ancylostomiasis	38.5	28.6		28.6	28.6	15.4			9.5			
b. toxocariasis	7.7											
c. giardiasis						7.7						
3. INFECTIVE DISEASE												
a. fungus				28.6		38.5		28.6	9.5			27.3
4. EYE												
a. conjunctivitis				14.3								
b. KCS								14.3				
c. Blocked nasolacrimal duct				7.1								
d. corneal opacity						7.7						
e. infection												9.0
f. entropion				7.1								
g. ectropion				7.1								

A₃ - Police general purpose (crime) dogs

B - Police narcotic dogs

C - Customs dogs

	<u>1981</u>			<u>1982</u>			<u>1983</u>			<u>1984</u>		
	A	B	C	A	B	C	A	B	C	A	B	C
5. EAR												
a. otitis externa		7.1		7.1	14.3	15.4	14.3		9.5			13.6
b. hematoma						15.4	7.1			7.1		
c. inflation						7.7						
d. waxy ears		7.1		7.1			7.1			7.1		
6. SKIN & S/Q TISSUE												
a. puncture wound	14.3			14.3	28.6		7.1	14.3				
b. bite wound										7.1		
c. abrasions	30.8											
d. alopecia	7.7	14.3		14.3		7.7		14.3				4.5
e. pruritis	7.7	14.3		21.4		7.7	14.3		4.8			4.5
f. dermatitis	7.7			21.4	14.3	14.3	7.1		14.3			22.
g. erythema	7.7	14.3		7.7								
h. abscess				7.7		7.7					14.3	
i. seborrhea						7.7						4.
j. scrotal oedema				7.7		15.4						
k. hygroma						7.7			4.8			
l. lip pyoderma				7.7								
m. granuloma									4.8			
7. MUSCULOSKELETAL												
a. hip dysplasia	46.2	28.6		21.4			7.1				14.3	
b. OCD				7.7								
c. lameness	23.1	14.3		7.7	28.6		42.9		4.8	7.1	14.3	
d. cruciate rupture										7.1		
e. 2° osteoarthritis										7.1		
8. CONNECTIVE TISSUE												
a. soft tissue injury							7.1			7.1		
b. lymphosarcoma										7.1		
c. maggot	7.7			14.3	14.3							
9. RESPIRATORY SYSTEM												
a. tracheitis				7.7		7.7						
b. pneumonia						7.7						
c. cough						7.7	7.1					
d. infection							15.4					

(b)

	1981		1982			1983			1984		
	B	C	A	B	C	A	B	C	A	B	C
10. DIGESTIVE TRACT											
a. gastroenteritis	7.7					14.3					
b. chronic ulcers(oral)							14.3				
c. imp. anal glands					7.7						
d. glossitis	7.7										
e. diarrhea	23.1	42.9	21.4	14.3	7.7	7.1					
11. URINARY TRACT											
a. calculi											4.5
b. cystitis	15.4		14.3		7.7				7.1	14.3	
c. glomerulonephritis	14.3										
12. REPRODUCTIVE TRACT											
a. epididymitis											4.5
13. SIGNS REFERABLE TO SYSTEMS OR ORGANS											
a. anorexia			14.3	14.3	7.7	14.3			7.1	14.3	
b. loss weight			7.7			7.1					
c. pyrexia	7.7				14.3			4.8			
d. emaciation					7.7						
14. BLOOD											
a. heartworm						7.1					
b. TCP(suspected)									7.1		
c. babesiosis					7.7						

(c)