www.kosmospublishers.com
contact@kosmospublishers.com
DOI: 10.37722/AOVSAR.2021101

Research Article | Archives on Veterinary Science and Research | AOASM-110
ISSN: 2641-6867

Descriptive information on police dogs died during 2009 to 2018 in Sri Lanka

RGI Jayathilaka[1], DMAP. Dissanayake[2*], A. Dangolla[3]

[1]Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka
[2]Kennels Division, Police Station, Kandy, Sri Lanka
[3]Faculty of Veterinary Medicine and Animal Science, Peradeniya, Sri Lanka

Received Date: December 10, 2021; **Accepted Date:** December 16, 2021; **Published Date:** December 22, 2021;

[*]**Corresponding author:** DMAP. Dissanayake, Kennels Division, Police Station, Kandy, Sri Lanka.
Email: priyankara.amal@gmail.com

Abstract

Kennels division in Sri Lanka Police, currently has about 250 working dogs in 56 different locations within the country. We attempted to identify common causes of deaths among those police dogs, to reduce the risks and incidence, if possible. Hand written data files of all 187 dead dogs during 2009-2018 were perused for this purpose while retired and untrained dogs were disregarded. The lowest number of deaths (7) had been reported in year 2009, which had kept increasing and the highest (26) was noticed in year 2014. Most (n=125) dogs died had been locally purchased. The mean age at death of all police dogs was 6.1 years (n=187). Most dogs died had been German shepherds (n=18) while Rottweiler (n=10), Doberman pincher (n=8) and Labrador retriever (n=8) followed. The commonest ultimate illness had been renal failure (n=48) while cardiac diseases (n=27) and multiple organ dysfunctions (n=27) were other common reasons for such deaths. A significantly higher number of dogs ($P<0.05$) died had been trained on explosive detection (41/57) compared to narcotic (8/57), tracking (3/57) and display (n=3/57). Explosive trained dogs had 1.8 elevated relative risk of contracting renal impairment compared to dogs trained for all other types of work. Incomplete, disorganised and hand written record keeping was noticed and suggest a uniform, systematic and electronic data recording system for improved and rapid decision making. An immediate prospective cohort study is suggested in this regard.

Introduction

Kennels of the Department of Police in Sri Lanka which began in 1948 in the capital city Colombo, was shifted to Kandy since most veterinary facilities at that time, were concentrated in University of Peradeniya, in central part of Sri Lanka. With time, police officers were trained both locally and abroad, and with expansions dogs were imported, in addition to local purchases. Currently, there are 48 peripheral and 8 special units of the Police Kennels while the headquarters is located in Kandy. These police dogs are trained for tracking criminals, detect explosives, for providing security and for narcotic investigations. Most of these dogs are additionally trained for various local parades, performances and exhibitions.

At present, there are about 250 dogs and 300 police handlers including 8 female officers. A veterinary surgeon was recruited to the division in year 2016. Over the past 10 years, several dogs have died, some of them while in their youth. Furthermore, relatively high incidence of renal disease among them has been suspected (Wijayawardhane et al., 2016). Sri Lanka has conducted no retrospective detailed scientific investigation on police dogs and therefore details of 187 dogs that died during 2009 to 2018 were examined to plan strategies to minimize unwanted deaths, if there were any, in future.

Materials and Methods

Headquarters of Police kennels division, was visited on 6 consecutive days, manually written files of all dogs died during the period 2009-2018 while in their working age, were identified, perused and required information was extracted on a

predetermined data collecting format. Untrained dogs, pups and those that were condemned or retired were disregarded from analysis. When appropriate, chi square test was performed at 5% significance and relative risk was calculated. All required information was not available for all dogs.

Results

Table 1 summarises the numbers of dogs died during respective years of the study period and their average age at death.

Year	Number of dogs		% of deaths	Age at death in years	
	Died	in division		Mean (min-max)	median
2009	7	238	3.0	4.1 (2-6)	4
2010	11	222	5.2	5.1 (2-8)	5
2011	17	193	9.7	6.0 (2-9)	6
2012	27	287	10.4	5.6 (2-9)	6
2013	15	268	5.9	5 (2-9)	6
2014	26	261	11.1	5.9 (3-9)	6
2015	28	289	10.7	6.9 (2-9)	8
2016	16	278	6.1	7.2 (2-9)	8
2017	18	224	8.7	6.2 (3-9)	7
2018	22	225	10.8	6.8 (2-9)	8

Table 1: Total number of working police dogs died during 2009-2018 with their age by the year (n=187).

Annual deaths show a slight increase over the years, highest number being in 2014 and 2015 while the lowest was in 2009. The mean age at death had been 4 years in 2009 which had improved to 6.8 by 2018 while the best had been in 2016.

Table 2 shows the age at death of these dogs and their origin. Most dogs died had been locally purchased and in the years 2014, 2015 and 2017, numbers of deaths among locally purchased dogs had been significantly higher ($p<0.05$) compared to that of imported dogs. Though statistically not significant, life expectancy of imported dogs had been lower compared to the local dogs.

	Age at death in years									
Origin	2	3	4	5*	6*	7	8*	9	Total	Mean
Local	10	7	8	20	18	19	27	16	125	6.2
Imported	3	9	9	3	6	14	14	3	62	5.8
Total	13	16	17	23	24	33	41	20	187	6.1
*. Statistically significant at 5% level.										

Table 2: Age at death and their origin of police dogs died during 2010 - 2018 (n=187).

From among the 187 deaths, renal failure was the commonest cause for death (48) while, respiratory diseases (27), multiple organ dysfunctions (27), cancer (15) and cardiac disease (8) had been the other causes of death in their descending order of frequency.

Table 3 shows the breeds of dogs died during the specified period which shows most of them had been German shepherds. In average, Doberman pincher appears to be the longest living (7.1 Years) though the differences were not statistically significant ($P>0.05$).

Breed	Number of Dogs	Age at death in years
		Mean (Min-Max)
German shepherd	18	6.2 (1-7)
Labrador Retriever.	10	5.7 (4-5.5)
Doberman pincher	9	7.1 (3-8)
Rottweiler	9	5 (1-6)
BelgianMalinois	5	6.4 (4-6)
English Springer	4	7.2 (6-7.5)
Cross breed	1	8 (8)
Napolean mastiff	1	5(5)

Table 3: Breed of the police dogs died during 2009-2018 and their respective age at death (only from available complete records n=57).

Most dogs died had been explosive trained (41/57), followed by narcotic (8), tracking (3), crime (2), display (2) and attack (1) trained. Out of the explosive detecting dogs, renal failure had been the most prominent single cause of death (17/41) and the relative risk of explosive dogs dying due to renal impairment was 1.8 compared to dogs trained for other types of work.

Discussion

Observed gradual increase in deaths among police dogs in Sri Lanka urged the current investigation. However, the death rates during the study period gradually reduced by 2018. The study showed the relatively short lifespan of the dogs at work which also improved over the time period of study. The situation must be further improved since average lifespan of dogs is 10-13 years (Michelle, 1999).

Expectedly, higher numbers of locally purchased dogs died specially when they were 5, 6 and 8 years old. In addition, it appeared that the lifespan of the dogs was much shorter when imported compared to those who were locally purchased. This finding needs further study to justify continuous dog importation since, it drains foreign reserves and some of such imported dogs can be used for breeding locally. Even among the locally purchased dogs, some had been purchased at young age while some had been donated at different ages. This discrepancy and non uniformity in data prevented detailed analyses in this regard.

Though statistically not significant, there was some evidence to state that explosive trained dogs die early in life and more frequently compared to others. Biological evidence to the available extent warrants further detailed perhaps prospective investigations. The dog welfare must also be also looked into, to be fair by the man's oldest animal friend (Lewis et al., 2018; Bryson, 2002) specially when used for man's benefit (Kaste, 2017). Such attempts would also justify continuous importation of dogs, if needed. It did not appear as if the impact of any tick transmisted hemoparasite to be important as seen elsehwhere in the country (Jayathilaka et al., 2021; Jayathilake et al., 2020) perhaps due to good tick control practices adopted by the Department of Police.

Respiratory conditions, multi organ dysfunction and cancer appear to be common according to available post-mortem reports, other than the renal failure. Though multi-organ dysfunction in post-mortem reports, need further clarification, cancers appear to be on the increase in the dogs in general in Sri Lanka and elsewhere (Gardener et al., 2016). Common causes for death in dogs in literature were cardiac disease, gastrointestinal disease, unobserved trauma, poisoning and infection (Takashima-Uebelhoer, 2011). The situation in Sri Lankan police dogs, appear to be different to such published information. Furthermore, known common causes of acute renal failure in dogs had been toxins such as antifreeze, rat poison, certain antibiotics, heavy metals, nonsteroidal anti-inflammatory drugs (NSAIDs) or ingesting large amounts of grapes or raisins (Takashima-Uebelhoer, 2011) and none of these have operated among the police dogs reported herein. It must not be forgotten, that continuous exposure of children to hazards chemicals may lead to develop carcinomas in adulthood (Kataria et al., 2015). Nonetheless, using alternatives for real explosives during training of police dogs could possibly improve the situation because several explosives have been identified to be hazardous to man (Seachrist et al., 2016).

References

1. Bryson S (2002). Effects of genetic selection and experience on police dog behavior.
2. Gardner HL, Fenger JM, London CA (2016). Dogs as a Model for Cancer. Annu Rev Anim Biosci. 2016;4:199-222.
3. Jayathilake PS, Rajakaruna RS, Fernando ADS, Wijerathna HSU, Ginarathne KMH, et al. (2020). Canine vector -borne diseases of working military dogs of Sri Lanka air force, free-roaming and owned dogs. Postgraduate Institute of Science Research Congress, RESCON. University of Peradeniya 140.
4. Jayatilaka PS, Wickramarathne DTJ, Wijayawardhane KAN, Mallawa MRCK, Dangolla A, et al. (2021). Renal Function of Haemoparasite Infected Working Dogs of Sri Lanka Air Force. Peradeniya University International Research Sessions (iPURSE) Peradeniya, Sri Lanka. 334.
5. Kaste M (2017). 'Eliminating Police Bias When Handling Drug-Sniffing Dogs.
6. Kataria A, Trasande L, Trachtman H (2015).The effects of environmental chemicals on renal function. Nat Rev Nephrol; 11:610-25.
7. Lewis TW, Wiles BM, Llewellyn-Zaidi AM, Evans KM, O'Neill DG (2018). Longevity and mortality in Kennel Club registered dog breeds in the UK in 2014. Canine Genetic Epidemiology 5, 10.
8. Michell AR (1999). Longevity of British breeds of dog and its relationships with-sex, size, cardiovascular variables and disease *Veterinary Record* 145, 625-629.
9. Seachrist DD, Bonk KW, Ho SM, Prins GS, Soto AM, et al. (2016). A review of the carcinogenic potential of bisphenol A. Reprod Toxicol.59:167-82.
10. Takashima-Uebelhoer BB, Barber LG, Zagarins SE, Procter-Gray E, Gollenberg AL, et al. (2012). Household chemical exposures and the risk of canine malignant lymphoma, a model for human non-Hodgkin's lymphoma. Environ Res.112:171-176.
11. Wijayawardhane KAN, Karunathilake KGSS, Kumara VSS (2017). Assessment and comparison of urinary protein: creatinine ratios of healthy domestic dogs and working dogs in kennels division in Sri Lanka police for early detection of renal disease. *Sri Lanka Veterinary Journal*,63:11-16.

Citation: *Dissanayake DMAP, Jayathilaka RGI, Dangolla A (2021) Descriptive information on police dogs died during 2009 to 2018 in Sri Lanka. Arch Vete Sci Res: AVSAR-110.*