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ONE-DAY-OLD BROILER CHICKS DEATH AFTER HEAT STRESS DURING TRANSPORT: CASE REPORT

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Introduction: The concept of stress was introduced by the German physiologist Hans Seyle in 1936, but it is still today a controversial topic among those involved with animal production, even to scientific community, probably due to the delicate relation between stress and animal welfare (BROSSI *et al.*, 2009). The consumer market, national and international, is increasingly demanding to humanitarian breeding issues, mainly in relation with animal welfare that include from thermal comfort to environmental preservation (CORDEIRO *et al.*, 2010). Since 1992, the Farm Animal Welfare Council (FAWC) conceptualizes the animal welfare as a physical and mental status with entitlement to the “five freedoms”: 1) Freedom from hunger and thirst; 2) Freedom from discomfort and being housed in appropriate environment; 3) Freedom from pain, injury and disease; 4) Freedom to express normal behaviour; 5) Freedom from fear and distress. The animal welfare is the sum of each of these freedoms, as in that way evaluates comprehensively all the factors that interfere with the animal’s quality of life (LUDTKE; GREGORY; DALLA COSTA, 2010). The heat stress, as example, is considered one of the reasons of

welfare decrease, as well as the increase of economic losses by productive decrease or animals’ death, being the outcome of the combination of broiler heat and humidity production, vehicle ventilation and weather conditions (BHANDARE; SHEARD, 2010). At ambient temperatures up to 21°C, the heat sensitive losses by radiation process, conduction and convections predominate; still at high temperatures, the main rote of heat dissipation is the respiratory evaporation (BROSSI *et al.*, 2009). Birds normally respond to stress with physiologicals and behaviours changes and death, being that when the stress is acute, mainly occurs an increase in catecholamines’ levels, such as adrenalín and noradrenalín (BHANDARE; SHEARD, 2010). **Objective:** This study aimed to report a heat stress case of one-day-old broiler chicks during the transport followed by animals’ death, in order to emphasize the importance of animal welfare not only for the animals’ quality of life, but also for their survival. **Case Report:** On February 23th, 2017, one-day-old broiler chicks were transported from the city Amparo/SP to Jaboticabal/SP, in a distance of 297km. The animals (n=4700 chicks) were taken out of the hatchery about 10 o’clock in the morning and arrived at the destination about half past four in the evening. The responsible for the chicks reported that during a travel stop, the animals were about 30 minutes within the vehicle without refrigeration. At this day, the mean ambient temperature was 31°C at Jaboticabal (ACCUWEATHER). During the unloading at the arrival, dead birds were observed and the large majority came to death after that, approximately totaling 2200 dead chicks (46,8%). The more evident clinical signals were the traces of living blood being eliminated by intestine and neurological signs, such as incoordination, torticollis, cervical vertebrae stiffness and “S”-shaped neck. **Results:** Ten chicks were subjected to necropsy and were observed bloody content in the final portion of ileum, large intestine and cecum and was still observed petechiae on the cecum mucosa. The skeletal musculature was reddish. Microscopically, was verified that all the birds had multiphocal areas of necrosis in the neurons and glial cells of the encephalon, besides of perivascular haemorrhage foci and neuronal chromatolysis, predominantly on the Purkinje neurons of cerebellum. In the gut there were haemorrhagic areas on the cecal mucosa as well as discretas heterophilic infiltrate foci and hyperplasia of epithelium cripts. The intestinal content was enriched with blood blended with cellular

debris, mucous and innumerable basophilic bacillus.

Discussion: The necrosis and multiphocal haemorrhagic features in the encephalon summed with the intestinal hemorrhagic content may be related with a hypovolemic shock picture. In non-pyrogenic hyperthermia, one of the causes of tecidual lesions would be related with the animal inability to heat dissipate, resulting in a collapse of several organs, such as those of the circulatory system (hypovolemia, cardiac arrhythmia, disseminated intravascular coagulation and haemorrhages). Other organs may suffer such these side effects, presenting necrosis, haemorrhages, among other findings (SANTOS *et al.*, 2003). In the animals of this report, neurological and enteric lesions are compatible with non-pyrogenic hyperthermia. The time that the animals remained within the truck without refrigeration, in a hot climate, hindered the body heat dissipation which is done by respiration in birds, culminating in lesions and death associated with a circulatory collapse. When birds are subjected to high temperatures there is an increase in respiratory frequency to convert the heat to vapour which is eliminated by the breathing, resulting to body heat decrease. At these situations generally occurs an increase in water intake to compensate the loss of fluid through the breathing. Similary, birds are too sensitive to temperatures over 30°C associated with failure of air circulation inside the truck, because in these cases the body heat dissipation becomes more difficult. In this report, chicks were subjected to higher ambient temperature and did not have water access (HEAT STRESS, 2004). **Conclusion:** This case report illustrates the importance to apply the appropriate environment temperature during chicks transportation. Their stress and mortality could have been avoided if had been respected an adequated transport temperature control.

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LACK OF DIAGNOSIS LEADING TO DEATH OF A CAT WITH *AELUROSTRONGYLUS ABSTRUSUS*: CASE REPORT

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Veterinary negligence and malpractice in Brazil are punished not only by administrative instances via Veterinarian's Code of Ethics, CFMV resolution nº 875/2007, chapter V, Federal Council of Veterinary Medicine (BRASIL, 2007), but by juridical instances: Article 927 from Brazilian Civil Code (BRASIL, 2016), and Article 14 of Brazilian Consumer Protection Code (BRASIL, 2017). Therefore, it is extremely important and desirable that the vets have knowledge about the laws that conduct their practices and have prudence while dealing with the patients and the owners. A hasty action