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Does acoustic trauma occur in pointers due to firearm noise? A prospective study

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With the increasing importance of health given to pet animals by the owners, the expectations from veterinary surgeons are increasing. The objective of the study is to meet the requests depending on, to a large extent, the examinations, which will facilitate the diagnosis by using improved technology and determine the prognosis. Accepted in veterinary neurology as noninvasive advanced diagnostic techniques, Magnetic Resonance Imaging (MRI), Computed Tomography (CT) and Electrodiagnostic testing are gradually becoming widespread. When the diagnostic tests are applied in addition to signalement, anamnesis, physical and neurological examinations that are fundamental in a neurological study, they provide avoidance from invasive applications, determination of the prognosis and support or confirmation of suspected neuroanatomical diagnosis before starting treatment. BAEP test can be used safely for examination of the brain stem auditory pathways of transmission that cannot be reached by other test procedures. In this study, we aimed to investigate hunting dogs used with normal neurological and video otoscopic examination results, whether acoustic trauma caused by firearm noise can be diagnosed by BAEP. For this purpose, hunting dogs with normal neurologic, video otoscopic and tympanometric examination results and have never been used for hunting is used to obtain reference BAEP values. While tympanometric pressure values of Acoustic Trauma Group (ATG) cases were higher than that in Control Group (CG), they were found to be in normal range (ATG left: 35.63 ± 38.79 /right: 34.00 ± 38.25 ; CG left: -23.90 ± 44.30 / right: -29.20 ± 36.87 daPa). BAEP records were saved using both click and tone burst stimuli. Records were taken at the frequencies of 0.5 kHz–1 kHz–2 kHz–4 kHz–6 kHz–8 kHz with tone burst stimulus. Wave I latency values obtained with click stimulus were only found to be significant in right ear at 30 dB intensity. Wave V was observed to be the last disappearing and the most observed wave among the waves obtained with high frequency stimulus. Based on this study, it was concluded that dogs experience acoustic trauma due to firearm noise, as revealed by a substantial decline in amplitude values in BAEP records obtained with click stimulus. It can be said that the use of products developed for dogs with awareness of hunters may also be beneficial to prevent harmful effects of acoustic trauma.

Biography

Ozlem Sengoz Sirin has completed his PhD in 2008 from Ankara University and Postdoctoral studies from Mehmet Akif Ersoy University School of Veterinary Medicine. She was the Coordinator and Instructor of the first AOVET course in Turkey. Additionally, she is working in group of TINNET as a delegate of Turkey (TINNET is a European research network funded by the COST program under the Action number BM1306). She finished six important projects in her country and still she is dealing with two projects and provides orthopedic trainings in her country.

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