CASE REPORT
JIVA 21 (1) April 2023
https://doi.org/10.55296/JIVA/21.1.2023.82-85

Received: 17/02/2023
Accepted: 18/03/2023

EPLEY REPOSITIONING MANEUVER TO TREAT BENIGN PAROXYSMAL POSITIONAL VERTIGO IN A BEAGLE PUP

Rajalekshmi S[1], Vinu David P[2]*, Sindhu O. K[3], Anju K. Daniel[4] and Dinesh P.T[5]

[1]MVSc scholar [*2]Associate Professor, [3&4]PhD scholars, [5]Assistant Professor
Dept of Clinical Veterinary Medicine, Ethics & Jurisprudence,[1,2,3&4]
Dept of Veterinary Surgery & Radiology,[5]
College of Veterinary & Animal Sciences, Pookode.
[*]Corresponding author- vinu@kvasu.ac.in

ABSTRACT

A three-month-old beagle pup was presented to the Teaching Veterinary Clinical Complex, CVAS, Pookode with a history of head tilt for two weeks. On clinical examination, animal showed temporary contralateral head tilt and ataxia when stood up from right lateral recumbent position. The distorted vestibular function was identified as Benign Paroxysmal Positional Vertigo (BPPV) and corrected using Epley repositioning maneuver method along with supportive therapy.

Keywords: Benign Paroxysmal Positional Vertigo, Epley repositioning maneuver, Head tilt.

CASE HISTORY AND OBSERVATION

A three-month-old beagle pup was presented to the Teaching Veterinary Clinical Complex, Pookode with a history of head tilt for two weeks. The pup was treated with Betahistine hydrochloride (Vertin tab) for two weeks. Animal was properly vaccinated and dewormed.

On clinical examination it was observed that, when the animal stood up from a right lateral recumbent position, contralateral head tilt and unsteady gait was present for approximately 30 seconds, followed by normal head carriage and a steady gait (Fig. 1 and Fig. 2). Thus, it was identified that the right side of the ear canal was affected as no abnormality in head carriage was observed when animal stood up from left lateral recumbency. All the vital parameters were within the normal range and there were no other physical, neurological and musculoskeletal abnormalities. No fungal or bacterial organisms could be isolated from microbial culture of ear swab.

TREATMENT AND DISCUSSION

The distorted vestibular function was identified as BPPV (Benign Paroxysmal Positional Vertigo) with the

help of response to treatment, absence of fungal or bacterial growth in microbial culture of ear swab and lack of evidence of any abnormality during radiographic evaluation of middle ear. Animal was made to get up from both left and right lateral recumbency and observed for the presence of vestibular signs to identify the affected side (Parnes *et al*., 2003). The distorted vestibular function was corrected using Epley Maneuver Method (Gupta *et al*., 2016). In this method, initially the dog was placed on dorsal recumbency with the head tilted towards the affected side for 90 seconds (Fig.3). Head alone was then turned 90° to the unaffected side, so that both head and body of the animal reached a straight line in dorsal recumbency and held in that position for approximately 90 seconds (Fig. 4). The trunk and head were then turned together another 90° towards the unaffected side and kept idle for 90 seconds (Fig.5). The animal made an uneventful recovery when left free after the standard procedure. Supportive therapy was advised with vitamin, mineral, and amino acid supplements orally for one month.

CLINICAL EXAMINATION

The vestibular system is accountable for maintaining the orientation of the animal with respect to its surroundings. A disturbance to the vestibular system results in: ataxia, circling, falling, head tilt, nystagmus, and/or vomiting. (Babac and Arsović, 2012). Two types of BPPV have been identified: primary/idiopathic and secondary/spontaneous. In primary or idiopathic BPPV, frequent remission and spontaneous recurrence is there, while secondary or symptomatic BPPV become apparent in viral infections or from head trauma, in motor vehicle accidents (Schmal and Stoll, 2003). Debris from the utricle can move into any of the ear

Fig. 1. Placing the dog in a right lateral recumbent position

Fig. 2. Dog showing head tilt to contralateral side

canals, resulting in distorted function of the vestibular apparatus and will cause severe signs and symptoms. The most commonly affected canal for debris to travel is into the posterior canal (Liatis *et al*., 2018).

There are two typical diagnostic tests used in humans to identify the affected ear canal side and they are the Dix-Hallpike Maneuver and the Side Lying Maneuver. In both the maneuvers nystagmus was induced by moving the head in specific positions (Parnes *et al*., 2003).

EPLEY MANEUVER METHOD

Fig.3. Placing the dog indorsal recumbency and headtilted towards the affected side

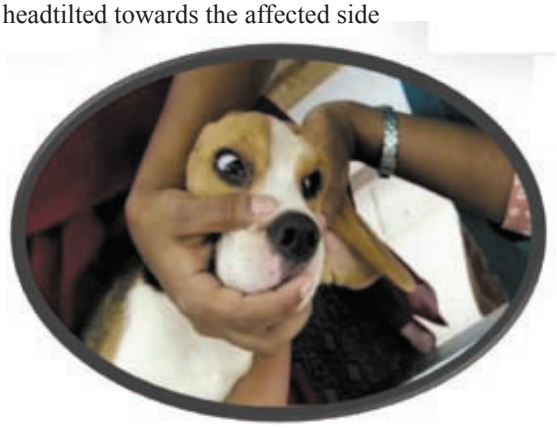

Fig.4. Turning the head 90° to the unaffected side

Fig.5. Turning the head and trunk together another 90° towards the unaffected side

There are several positioning techniques in treating BPPV, depending on the ear canal being affected. Some of the postural therapeutic techniques for the treatment of the canine patient can be challenging since this requires co-operation from the affected animal. The main repositioning techniques include the Semont Liberatory Maneuver, Horizontal Canal Repositioning Maneuver, Epley Repositioning Maneuver and Modified Epley Repositioning Maneuver for the canine patients (Kraeling, 2014).

CONCLUSION

Here we had used a Modified testing and repositioning maneuver for treating the distorted vestibular function called Epley Repositioning Maneuver, and this maneuver has been considered as the most effective in treating symptoms of BPPV caused by otoliths in the posterior canal which is also known as as the particle repositioning or canalith repositioning

procedure. It has a success rate of 90 per cent after a single repetition. Repeating the maneuver may improve that rate in some cases.

REFERENCES

Babac, S. and Arsović, N. 2012. Efficacy of Epley maneuver in treatment of benign paroxysmal positional vertigo of the posterior semicircular canal. *Vojnosanit. Pregl.* **69:** 669-674.

Gupta, C., Passi, D., Singh, P., Kumar, P., Rai, S. and Ahmed, M., 2016. Benign Paroxysmal Positional Vertigo (BPPV) Following Dental Surgical Procedures: Short Clinical Study. *Positions*, 2, p.11.

Liatis, T., Balla, S., Baka, R., Patsikas, M. and Polizopoulou, Z. 2018. Recurrent Peripheral Vestibular Paroxysm in a Dog: is it a New Entity? *31st Annual symposium of the European Society of Veterinary Neurology*. 20-22.

Parnes, L. S., Agrawal, S. K. and Atlas, J. 2003. Diagnosis and management of benign paroxysmal positional vertigo (BPPV). *Cmaj.* **169:** 681-693.

Schmal, F. and Stoll, W. 2003. Diagnosis and management of benign paroxysmal positional vertigo. *Laryngo-rhino-otologie*, **81:** 368-380.