RHINOESTRIASIS IN RACE HORSES IN ISTANBUL AND THE USE OF ENDSKCOPE FOR ITS DIAGNOSIS

E. TÜZER* H. TAN**

İstanbul'da yarış atlarında rhinoestriasis ve tanıda endoskopun kullanılması

Özet: Yarış amacıyla Tarsus'tan İstanbul'a getirilen 8 yarış atı antremanlar sırasında üst solunum yollarına ilişkin bozukluklar gösterdi. Bir endoskop kullanılarak Os turbinata ve nazofarigeal poğ üzerindeki mukozadan 34 adet 2'nci ve 94 adet 3'üncü devre larva toplandı. Larvaların Rhinoestrius purpureus ve Rhinoestrius latifrons'a ait olduğu anlaşılıdı. Türkiye'de Rhinoestrius latifrons'un görüldüğü ve rhinoestriasis'in tanısında endoskopun kullanılışı bu yazıda ilk kez bildirilmektedir.

Summary: Eight two-years-old thoroughbred race horses, which had been brought to Istanbul to race had upper respiratory difficulties on efforts. Using an endoscope, the horses were examined and 3 second and 94 third instar larvae were collected from near the turbinated bone and nasopharyngeal recess. The larvae were identified as Rhinoestrius purpureus and R. latifrons. All the horses improved in a short period after the removal of the parasites. This is the first report on the use of endoscope for diagnosis of rhinoestriasis and on the presence of R. latifrons in Turkey.

Introduction

The larvae of Rhinoestrius purpureus, R. usbekistanicus and R. latifrons infest in the nasal cavities and their surroundings in horses (1, 6).

The presence of R. purpureus (2, 3, 4, 5, 6) and R. usbekistanicus (6) in Turkey were previously recorded. One (2) out of these literature was concerning with an ophthalmonmyiasis in a man due to R. purpureus.

* İstanbul Univ. Vet. Fak. Parazitoloji ABD, 34851 Avcılar, İstanbul/Turkey
** İstanbul Univ. Vet. Fak. İç Hastalıklar ABD, 34851 Avcılar, İstanbul/Turkey
Material and Method

On endoscopic inspection of the race horses suffering from upper respiratory difficulties, the insect larvae were seen in 8 two-year-old thoroughbred race horses (4 male and 4 female). The horses were bred in two different stables in Tarsus (a county in the Southern Anatolia) and brought to Istanbul to race between June and August of the year 1989. Their owners had a complain about their low performance and the upper respiratory difficulties on efforts.

The horses were examined at a few days intervals. Each time a fiber optic endoscope (Olympus GIF Type P 3) was used for inspection of nasal, pharyngeal and laryngeal cavities and for removing the parasites.

Out of the collected larvae, the 15 well-developed third instar ones were incubated in jars containing moisture sandy soil at room temperature (23°-24°C) during a period up to 7 weeks to develop to the adult stages. On the other hand, the rest were put into 70% alcohol after being killed in boiling water.

The identification of larvae were done according to Grunin (1) and Zumpt (6).

Results

Out of the horses, 2 were infested with Rhinoestrus purpureus, 3 with R. latifrons and 3 with both. A total of 128 larvae (34 second instar and 94 instar) were collected. All the second instar larvae and 6 third instar larvae were obtained from the mucosal layer covering near the turbinated bone and 88 third instar larvae from the nasopharyngeal recess. Second instar larval differentiation couldn’t be done. Out of identified 79 third instar larvae, 48 belonged to R. latifrons and 31 to R. purpureus. Out of 15 incubated larvae, only four developed to adult (one of them R. latifrons and 3 R. purpureus) (Tabl.) (Fig.).

Table. Differentiation of the larvae

<table>
<thead>
<tr>
<th></th>
<th>Male horses</th>
<th>Female horses</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd inst. larvae(*)</td>
<td>9</td>
<td>25</td>
<td>34</td>
</tr>
<tr>
<td>Incubated 3rd inst. larvae(*)</td>
<td>3</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>R. latifrons 3rd inst. larvae</td>
<td>2</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td>R. purpureus 3rd inst. larvae</td>
<td>28</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>86</td>
<td>128</td>
</tr>
</tbody>
</table>

(*) not identified
Before being removed the parasites all the horses showed low performance, upper respiratory difficulties during the race or exercise and serous discharge from their nostrils. Some of them had cough at the time of pharyngeal palpation. After being removed the parasites, erosions, ulcerations and mucoid secretion were seen on their attachment areas on endoscopic inspection. All the horses were improved in a short time.

Discussion

It is difficult to make a diagnosis of rhinoestriasis in living animals. In this paper a new way for the diagnosis in living animals is firstly reported.

In the previous studies the occurrence of Rhinoestus purpureus (2, 3, 4, 5, 6) and R. usbekustanicus (6) in Turkey was reported. This paper is the first report on the presence of R. latifrons in Turkey.

Kaynaklar


