

عنوان مقاله:

Molecular Identification of Trichostrongylus Species Among Small Ruminants in Mazandaran Province, Iran

محل انتشار:

مجله تحقیق در پزشکی مولکولی، دوره 10، شماره 1 (سال: 1400)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Ali Bakooie Katrimi - Mazandaran Central Veterinary Laboratory, Medical Sciences, Veterinary Administration of Mazandaran Province, Sari, Iran

Naser Hoghooghi-Rad - Department of Parasitology, School of Specialized Science of Veterinary Medicine, Science and Research Branch, Islamic Azad University, Tehran, Iran

Azadeh Mizani - Department of Parasitology, Pasteur Institute of Iran, Tehran, Iran

Afsaneh Amouei - Mazandaran Central Veterinary Laboratory, Medical Sciences, Veterinary Administration of Mazandaran Province, Sari, Iran

Shahrokh Ranjbar-Bahadori - Department of Parasitology, Faculty of Veterinary Medicine, Garmsar Branch, Islamic Azad University, Semnan, Iran

Ali Eslami - Department of Parasitology, Faculty of Veterinary Medicine, Tehran University, Tehran, Iran

Mehdi Mehralinezhad Shiadeh - Research Center of Poultry Diseases, Medical Sciences, Veterinary Administration of Mazandaran Province, Medical Sciences, Qaem Shahr, Iran

Bahram Laktarashi - Research Center of Poultry Diseases, Medical Sciences, Veterinary Administration of Mazandaran Province, Medical Sciences, Qaem Shahr, Iran

Saeid Salehi - Mazandaran Provincial Veterinary Department, Medical Sciences, Veterinary Administration of Mazandaran Province, Sari, Iran

Tooran Nayeri Chegini - Toxoplasmosis Research Center, Communicable Diseases Institute, Mazandaran University of Medical Sciences, Sari, Iran

Zahra Hosseiniinejad - Toxoplasmosis Research Center, Communicable Diseases Institute, Mazandaran University of Medical Sciences, Sari, Iran

Amir Hossein Pourmand - Mazandaran Central Veterinary Laboratory, Medical Sciences, Veterinary Administration of Mazandaran Province, Sari, Iran

Mehdi Sharif - Hospital Administration Research Center, Sari Branch, Islamic Azad University, Sari, Iran

خلاصه مقاله:

Background: Trichostrongylus is an intestinal parasite that is highly prevalent in humans and livestock worldwide. There is limited information about the prevalence and epidemiology of Trichostrongylus species among the infected livestock in Mazandaran Province, northern Iran. This study aimed to identify Trichostrongylus spp. among small ruminants using morphometric and molecular methods. **Materials and Methods:** Small intestinal organs of sheep and goats, slaughtered in Mazandaran Province, were examined for infectivity with Trichostrongylus parasites. Primary species identification was conducted based on the morphological characterization of the male worms. The internal transcribed spacer (ITS) II regions of the ribosomal DNA of the worm tissues were amplified using the polymerase chain reaction (PCR) assay and then the product was subjected to sequencing. Subsequently, the PCR products of the ITS II region were subjected to digestion by HinfI and DraI restriction enzymes using the PCR-restriction fragment length polymorphism (RFLP). **Results:** Of 180 samples, 98 (54.44%) were confirmed positive for Trichostrongylus based on the conventional PCR. The digestion of the PCR products with HinfI and DraI facilitated the identification of three Trichostrongylus species, namely Trichostrongylus colubriformis (35%, 90.81%), Trichostrongylus axei (4%, 4.08%), and Trichostrongylus vitrinus (5%, 5.1%). Both morphometric and RFLP techniques resulted in the differentiation of the three Trichostrongylus species. **Conclusion:** The present study was the 1st attempt in the last 30 years for the identification of Trichostrongylus species in small ruminants in Mazandaran Province. The findings of this study can be helpful for epidemiological and ecological studies, the establishment of effective control programs, and the management of gastrointestinal parasites in Mazandaran Province.

کلمات کلیدی:

Trichostrongylus, PCR-RFLP, Ruminants, Mazandaran Province

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1881395>

