The Bronchial Tree and Lobular Division of the Formosan Reeve’s muntjac (Muntiacus reevesi Micrurus) Lung

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ABSTRACT To realize the branching of bronchus in the lungs of Taiwanese endemic deer, the lungs of six Formosan Reeves muntjac (Muntiacus reevesi micrurus) were injected with latex colloid solution and the coagulated bronchial tree was used to examine in this study. Externally, the both lungs of Formosan Reeves muntjac are subdivided into numerous lobes by deep fissures. The left lungs consist of cranial, and caudal lobes, and the right one is subdivided to cranial, middle, caudal and accessory lobes. Except for the right cranial lobe, the chief bronchi of right and left lobe bifurcate from the trachea bifurcation. The bronchus of right cranial lobe arises alone from the trachea located on the upstream of trachea bifurcation. According to Dr. Nakakukis classification pattern, the branching of bronchial tree in the lung of Formosan Reeves muntjac can also be subdivided to the right bronchus and the left bronchus. The right bronchus is subdivided subsequently to right lateral bronchiole (L; from 1st to 6th), right dorsal bronchiole (D; from 1st to 6th), right medial bronchiole (M; only one), and the right ventral bronchiole system (V; from 1st to 3rd). The left bronchus branches to form left lateral bronchiole (L; from 1st to 4th), left dorsal bronchiole (D; from 1st to 2nd), left medial bronchiole (M; from 1st to 5th), and the left ventral bronchiole system (V; only one). [Liao AT, Chiang MH, Chi CH and *Kuo TF. The Bronchial Tree and Lobular Division of the Formosan Reeve’s muntjac (Muntiacus reevesi Microcurus) Lung. Taiwan Vet J 35 (1): 29-35, 2009. *Corresponding author TEL: 886-2-3366-1295, FAX:886-2-223-6483, E-mail: tzongfu@ntu.edu.tw]

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INTRODUCTION

The comparative anatomical study of the lung was commenced by Aeby who examined numerous mammal lungs including human [1]. He originally classified the bronchioles into the epiarterial and hypoarterial bronchioles according to the passing position of the pulmonary artery. Since human left lung don’t have epiarterial bronchiole, he rather classified the bronchioles into the dorsal and ventral bronchiole systems. Another study by examining numerous mammalian lungs identified that the bronchioles from the upper and middle lobe were united in the left lung before they joins the trachea [3]. In the middle of 20 century, Jackson and Huber divided the human lung into ten pulmonary segments on each side for the con-