Responses of bronchus - associated lymphoid tissue (balt) following intratracheal exposure of pasteurella multocida B2 in goats / Kayalvily d/o Tharmalingam.

Lihat sebelah

RESPONSES OF BRONCHUS – ASSOCIATED LYMPHOID TISSUE (BALT) FOLLOWING INTRATRACHEAL EXPOSURE OF *Pasteurella multocida* B2 IN GOATS

By

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PENGAKUAN DAN PENGESAHAN LAPORAN PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: Bronchus – Associated Lymphoid Tissue Following Intratracheal Exposure Of *Pasteurella multocida* B2 In Goats oleh Kayalvily A/P Tharmalingam No. Matrik UK6804 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains-Sains Biologi Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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Especially dedicated to my lovely family, father, mother, sisters, brother and all my friends whom made my dreams come true.

Thanks for your encouragement,

Thanks for your support,

Thanks for pouring your unconditional love!

"THANK YOU SO MUCH

And

LOVE YOU ALL.....!"

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ABSTRACT

A study on the response of Bronchus – Associated Lymphoid Tissue (BALT) with intratracheal exposure of formalin - killed *Pasteurella multocida* B2 in goats was conducted at the Microbiology and Histology Laboratory, Faculty of Science and Technology, Kolej Universiti Sains dan Teknologi Malaysia. Six clinically healthy goats about seven months old were divided into two equal groups. All goats in group one were exposed with intratracheal administration of 1ml inoculum containing 4.65 X 10^8 cfu/ml *Pasteurella multocida* B2. Goats in group 2 were remained as unexposed controls. Fourteen days after intratracheal exposure of the formalin - killed *Pasteurella multocida* B2, all goats were slaughtered. Generally, all goats in group one with intratracheal exposure of formalin - killed *Pasteurella multocida* B2 showed significantly ($p < 0.05$) higher number of lymphocytes and significantly ($p<0.05$) larger area size of BALT compare to the unexposed control goats in group 2. There was a strong correlation ($r=0.93$) between the number of lymphocytes and area size of BALT. The results emphasized that single intratracheal exposure to formalin - killed *Pasteurella multocida* B2 has successfully able to stimulate good antibody response in goats.

RESPONS TISU LIMFOID BERKAIT BRONKUS (BALT) TERHADAP PENDEDAHAN INTRA-TRAKEA DENGAN *PASTEURELLA MULTOCIDA* B2 PADA KAMBING

ABSTRAK

Satu kajian tentang respons tisu limfoid berkait bronkus (BALT) terhadap pendedahan kepada *Pasteurella multocida* B2 yang dibunuh dengan formalin melalui suntikan intra-trakea telah dilaksanakan di Makmal Mikrobiologi dan Makmal Histologi, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia. Enam ekor kambing yang sihat secara klinikal berumur tujuh bulan telah dibahagikan kepada dua kumpulan. Kesemua kambing dalam kumpulan 1 telah disuntik sekali secara intra-trakea dengan 1ml inokulum yang mengandungi 4.65 X 10^8 cfu/ml *Pasteurella multocida* B2 yang telah dibunuh dengan formalin. Kambing dalam kumpulan 2 telah dijadikan sebagai kawalan. Kesemua kambing telah disembelih selepas 2 minggu dicabar. Secara keseluruhannya, kesemua kambing dalam kumpulan 1 yang telah menunjukkan peningkatan yang ketara dalam bilangan sel limfosit dan saiz kawasan BALT secara signifikan berbanding kambing dalam kumpulan 2 yang telah dijadikan sebagai kawalan. Terdapat hubungan kolerasi yang kuat (r=0.93) di antara saiz kawasan BALT dan bilangan sel limfosit. Keputusan kajian ini menunjukkan bahawa, pendedahan kepada *Pasteurella multocida* B2 yang dibunuh dengan formalin melalui suntikan secara intra-trakea sekali telah berjaya merangsangkan respons antibodi yang baik pada kambing.