ABSTRACT

TOLERAN PADA MENCIT NEONATUS BALB/c
SETELAH PAPARAN ALERGEN PADA INDUK BUNTING
(Kajian toleran terhadap ekspresi sitokin IL-2, IFN-γ, IL-4, IL-5, IL-10, TGF-β1
dan subklas imunoglobulin IgG-1, IgG-2a, IgG-2b, IgG-3 dan IgM, IgA, IgE)

Risa Etika

Background : Allergy is a health problem that increasingly need attention. Prevention efforts still have not managed to improve the disease satisfactorily. Meanwhile in–utero prevention efforts based on immunologies comprehension remains unclear. Research on tolerance in newborn Balb/c mice after exposing with allergens on pregnant mice needs to be done.

Aims : To explain the allergens exposure on pregnant Balb/c mice and its role to tolerance in newborn mice by measuring cytokines Th1, Th2, Treg and IgG-1, IgG-2a, IgG-2b, IgG3 subclass level and IgM, IgA, IgE.

Methods : Research in Virology & Immunology Laboratory, Dept of Microbiology Veterinary Faculty Airlangga University. Experimental study post-test only control group design, using factorial design to assess the effect of allergens Mite, Cat Hair, Dog Hair, Chicken Albumin and Cow Milk Protein with low-dose and high dose on pregnant Balb/c and newborn mice to tested variables. Sixty Balb/c pregnant mice divided into intervention group and control. Blood sampling of pregnant Balb/c and newborn mice to assess Th1(IL-2, IFN-γ), Th2 (IL-4, IL-5) Treg (IL-10, TGF-β1), Immunoglobulin IgG-1, IgG-2a, IgG-2b, IgG3 subclass and IgM, IgA, IgE using ELISA Kit.

Results : Mite exposure increase response on Th1, Th2 and Treg in newborn mice but not in IgE. Cat Hair, Dog Hair, Chicken Albumin and Cow Milk Protein exposure increase response on Th2 and IgE.

Conclusion : Mite exposure to pregnant Balb/c mice could make the newborn mice tolerance but not in Cat Hair, Dog Hair, Chicken Albumin and Cow Milk Protein exposure.

Keyword : allergen, pregnant Balb/c mice, newborn mice, tolerance, cytokine