**In utero exposure to peanuts and the development of peanut allergy in children**

 Hiruni Wickramasinghe, PGY 2

July, 2012

Peanut allergy is a severe Immunoglobulin E mediated hypersensitivity reaction to protein found in legumes. Prevalence of peanut allergy in the last several years has increased especially in the developed nations where peanut consumption is very high. There has also been a significant increase in the prevalence of peanut allergy in childhood. No clear association has been established as to why this is the case and many different hypotheses exist, one being association of maternal consumption of peanuts during pregnancy and the subsequent development of peanut allergy in childhood especially in a background of family history of atopy. Hence an extensive literature review was done to determine if maternal consumption of peanuts by pregnant women increase the likelihood of their child subsequently developing peanut allergy. A literature search was done using Pubmed, Cochrane and MeSH database using keywords such as “peanut”, “allergy” “early sensitization”, “in utero” and “consumption”. All the studies selected were valid with clear end point. Some of the studies supported the hypothesis and stated that in utero exposure to peanuts did increase the likelihood of subsequent development of peanut allergy in children whilst others refuted this hypothesis. However there was one study that lacked applicability secondary to small sample size.

Almost all the studies were limited by recall bias as maternal diet in reference to peanut consumption was inquired retrospectively. The final clinical conclusion from this study is that it is advisable to recommend mothers with a family history of atopy ( such as anaphylaxis, allergic rhinitis, asthma and eczema) to avoid peanut consumption during pregnancy in order to minimize the risk of their child developing peanut allergy secondary to this in-utero exposure.

References:

1. A DesRoches, C Infante-Rivard, L Paradis, J Paradis, E Haddad. Peanut Allergy: Is Maternal Transmission of Antigens During Pregnancy and Breastfeeding a Risk Factor?

J Investin Allergol Clinical Immunology 2010; Vol.20(4): 289-294

1. Frant L, Marian A, Visser M, Weinberg E, Potter PC. Exposure to peanuts in utero and in infancy and the development of sensitization to peanut allergens in young children.

 Pediatr Allergy Immunol 1999- 10:27-32

1. Venter C, Pereira B, Voigt K, Grundy J, Clayton CB, Higgins B, Arshad SH, Dean T. “Factors associated with maternal dietary intake, feeding and weaning practices, and the development of food hypersensitivity in the infant”. Pediatr Allergy Immunol 2009: 20: 320-327
2. Gideon Lack, M.B.B.Ch, Deobrah Fox B.A., Kate Northshore MSc, Jean Golding PhD “Factors Associated with the Development of Peanut Allergy in Childhood”

N Engl J Med 348;11 March 13 2003