Hypothetical Thinking on Influences of Chemicals in the Environment and Female Sex Hormones in Food on Japanese Children

Kazuhiko Kakuta*

Department of Pediatrics, Kakuta Child & Allergy Clinic
1-16-8 Chuo Tagajyo-shi, Miyagi 985-0873, Japan

(Received April 28, 2004; accepted May 23, 2005)

Key words: allergy, estrogen, progesterone, Th1/Th2 balance, sex hormones in food

Allergic diseases have rapidly increased in Japan. Changes in the prevalence of bronchial asthma in children and birth years of anaphylactic patients suggest that an event that may have increased allergic diseases occurred in about 1970, and chemicals in the environment and food are considered to be a cause. Some environmental pollutants inhibit the development of the immune system, and such chemicals possibly affect immune development from the fetal period. Female hormones contained in milk, meat and eggs may also affect the development of the immune system after birth. It may be possible that a cause of the current increase in allergic diseases, the disruption of Th1 (T lymphocyte helper type 1)/Th2 (T lymphocyte helper type 2) balance, occurs due to a complex influence of chemicals and excess female hormones, and the development of the immune system may be affected in children in whom hormone production is physiologically low, particularly boys before puberty. The influences of chemicals and sex hormones in food have not been fully investigated, and future studies are expected.

*E-Mail: BZH07614@nifty.ne.jp