

Effect of Fermented Food on General Anaesthesia in North Eastern Part of India

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Dear Editor,

Fermentation is one of the oldest and most economical methods of producing and preserving food items. In North Eastern part of India, majority of population consume fermented foods. Variety of dishes are prepared from fermented products of fish, bamboo shoots, vegetables and soybean [1].

We had observed consecutive 125 adult patients (>18 years) who were admitted in the Department of Urology for various urological surgeries under General Anaesthesia (GA). Out of 125 patients, 95 patients had raised Absolute Eosinophil Count (AEC) but without any symptoms or signs. On history, 95 patients gave the history of almost daily intake of fermented food in their meals. No patient had history of any allergy, asthma, nearby parasitic infection, drug use or any malignancy. All other laboratory test were normal.

In all 95 patients, AEC was > 1000/ μ l (Normal 50 to 450/ μ l). A course of anti-helminthic was started, thereafter, as per the institutional protocol for 3 days to all eosinophilic patients. Repeat AEC of all patients were still >1000/ μ l. Patients were taken up for surgery under steroid cover. Each patient was treated with intravenous hydrocortisone 2mg/kg tid given previous day of surgery and on the morning of surgery [2].

Eosinophilia can be idiopathic (primary) or secondary to another disease. Eosinophils cause release of mediators, cationic proteins and eosinophilic cationic proteins like histamine from mast cells and basophils. This facilitates the entry of inflammatory mediators to afferent nerve endings, leading to bronchoconstriction [3]. Histamine is rarely found in fresh fish but its level increases as its decomposition progresses [4-6]. In the developing world, parasites are considered the most common cause [7] but in North Eastern part of India,

fermented food especially fermented fish (ngari) [1] consumption is highly prevalent. We hypothesise it as the most common cause of eosinophilia. Patients with eosinophilia, when exposed to GA, have a risk of developing complications like urticaria, bronchospasm, coagulopathy and acquired respiratory distress syndrome during the peri-operative period [8].

The purpose of this article was to highlight that fermented food ingestion is quite prevalent in North Eastern part of India. So, patients of these regions must be tested of eosinophilia before GA even without symptoms to avoid complications during peri-operative period.

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