

## Dietary Factors Affecting Recent Lung Cancer Mortality in the Twelve Districts in Japan

Toshiko FUJII and Satoko KAWABE

In order to examine regional differences in the death rate due to lung cancer among Japanese males and females in Japan's 12 districts, data were analysed for a possible relationship between dietary factors and the SMR (Standardized Mortality Ratio) from lung cancer during two five-year periods, 1983-1987 and 1988-1992. The dietary factors were determined by analyzing the data from the National Nutrition Survey in Japan on the intake of ten kinds of nutrients and 109 kinds of food and beverages, five and ten years before each survey period of the SMR.

The findings in the present study are as follows :

1. There were differences in the death rate due to regional variations in dietary habits.
2. There was a significant positive correlation for both males and females between the SMR and two nutritional items, intake of protein from animals and fish and average percentage of protein intake from animals and fish.
3. There was a significant inverse correlation for both males and females between the SMR and one nutritional item, vitamin C. And also, a significant inverse correlation was found for males between the SMR and one nutritional item, calcium and for females between one nutritional item, iron.
4. There was a significant positive correlation for both males and females between the SMR and one food item, onion. And also, a significant positive correlation was found for males between the SMR and one food item, beef, and for females with three food items, foods from animals and fish, butter, and beer.
5. There was a significant inverse correlation for both males and females between the SMR and four food items, potatoes, tuber, etc., carrot, and vegetables other than green and yellow vegetables. And also, a significant inverse correlation was found for males between the SMR and vegetables other than green and yellow vegetable group excluding Japanese radish, onions, tomatoes, cabbages, cucumbers and Chinese cabbages, and for females with one food item, Japanese radish.

## Fuchsin-Staining Measurement of Sticky Substance (Slime) Produced by *Staphylococcus epidermidis*

Hiroko MINE and Kenji NINOMIYA

Quantitative measurement of slime produced by *S. epidermidis* was investigated in this paper. Isolated strains of *S. epidermidis* were suspended in a CASEIN medium in plastic conical tubes (SUMILON : polystyrene) and were cultured at 35 °C for 24 hours. After staining the slime adhered on the tube wall with a fuchsin solution, the stained solution was eluted into boiled phosphate buffer saline (PBS).

Absorbance of the eluted solution at OD 547nm was considered to be a measure of the amount of slime. The amount of slime produced by 48 strains of *S. epidermidis* (26 strains from young people in their twenties and 22 strains from old people in their fifties), some biochemical characteristics and susceptibilities to antibiotics were studied and their relationship was analyzed statistically. It was shown that the 22 strains from old people produced more slime than the 26 strains from young people. However the difference was not significant ( $p < 0.05$ ). Thirty mannose-utilizing strains produced significantly higher amounts of slime than 18 mannose non-utilizing strains ( $p < 0.05$ ). Among 5 antibiotics tested (PCG, ABPC, SM, CP and FOM), 37 strains resistant to SM produced significantly more slime than 11 sensitive strains.

## **A Study of Factors Related to Independence of Swallowing in Patients with a Cerebrovascular Accident**

Misako HIGASHIJIMA

The purpose of this study was to identify the factors related to the ability to swallow in patients who have had a cerebrovascular accident, in order to determine the prognosis for swallowing and to create an efficient treatment plan. Evaluations were done before and after therapy, which was based on three items of videofluorography and seven items of occupational therapy. The results indicated that the ability to swallow at the time of discharge after therapy was significantly related to problems of the pharyngeal phase, aspiration, and dementia at the beginning of therapy. The results suggest that these three factors are important in determining the prognosis for swallowing and creating an efficient treatment plan.

## **The Vigilance Evaluation for Alzheimer's Disease with the Simple Light Stimulation Method**

Takeshi FUKUI and Keiko INOUE

A suitable method of vigilance evaluation was investigated. The purpose of this study was to examine the adaptation of a simple light stimulation method (SLSM) for Alzheimer's Disease.

We evaluated Alzheimer's Disease patients with the SLSM, repeating numbers, and serial sevens. We compared these results with vigilance evaluation by behavior observation.

Only SLSM showed a significant correlation with the vigilance evaluation by behavior observation.

These results suggest that the SLSM is an effective method of vigilance evaluation for Alzheimer's Disease.