

## Oral Health Care for Nutrition Support and Infection Control in Hospital

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### Introduction

Aging population means increase in the number of elderly people who need nursing care in Japan. Under such circumstances, the problems of oral care in hospital become increasingly serious. Ministry of Health, Labor and Welfare and Japan Dental Association promote "8020 movement" which mean keeping over 20 teeth for life. However, sudden illness, such as a stroke of apoplexy, limit the ability to perform activities of daily living include mouth care. As a result, increasing the number of bacteria in the oral cavity and the fall of oral functions cause various troubles of teeth and oral mucous, multiple caries, gingival inflammation, mucous injuries by remaining teeth, dry mouth, for example. Poor oral hygiene is also a cause of aspiration pneumonia. It is reported that oral health care provided by nurses, caregivers and dental hygienists reduce the risk of pneumonia<sup>1)</sup> There are many dental needs of the patients in hospital. At this symposium, I report the importance of improving oral health care for nutrition support and infection control in hospital to improve patients' QOL.

### System development for oral health care at hospital wards

Questionnaire survey was conducted to improve oral health care at wards of Mitoyo general hospital. All nurses (10 men, 243 women) at wards were asked to answer the questions and the replies were used for task analysis. The survey revealed the following issues:

1. There was no uniform care provided by nurses.
2. There was shortage in knowledge and skill of oral care.
3. There were cases where patient's conditions prevented nurses from giving appropriate oral care.
4. There was delay in starting oral care.
5. There was shortage of time and human resources to provide oral care.

The following action plans were made and implemented to respond to the needs for improved oral care for inpatients:

1. The workshops were held for nursing staffs to learn practical knowledge and skill of oral care.

2. Oral health care assessment sheet was developed for common use at wards.
3. It was decided that dental staffs are present in NST (Nutrition Support Team) and case conferences of swallowing disorder so that nurses and dental staffs exchange and share information.
4. A dental hygienist will offer technical advice to nursing staffs at bedside when there are difficult oral health care problems.
5. The ward oral care record is to be used.

Based on the result, system of cooperation between the dental staffs and the other professionals was developed (Figure 1).

### Oral health care is effective to prevent wound infection in percutaneous endoscopic gastrostomy (PEG) treatment

Percutaneous endoscopic gastrostomy (PEG) is performed to secure the route of nutrition for the patients with swallowing disorder or malnutrition. Post-operative complication includes skin infection of bacteria in oropharyngeal secretion at the gastrostomy tube site and aspiration pneumonia in the pull technique, because the gastrostomy tube passes through oral cavity and pharynx. We estimated the efficacy of oral health care performed prior to PEG treatment. In this study, a total of 68 patients received PEG treatment between April 2003 and October 2004. The first 29 patients did not receive professional oral health care by dental hygienist (non-oral care group). The frequency of wound infection in this group was 34.5%. Fifteen patients received professional oral health care 1 to 3 times a week (irregular oral care group): 26.7%, 24 patients received oral health care every day by nurse and dental hygienist 1 week before PEG treatment according to clinical path for PEG (path group): 12.5% (Figure 2). Frequency of body temperature higher than 38.00 were checked to estimate the incidence of pneumonia. The frequency of fever increased after PEG treatment in the non-oral care group and the irregular oral care group, however in the path group, decreased after PEG treatment (Figure 3). The results showed that oral health care provided by dental hygienist and nurses was very effective to reduce the risk of wound infection and aspiration pneumonia in

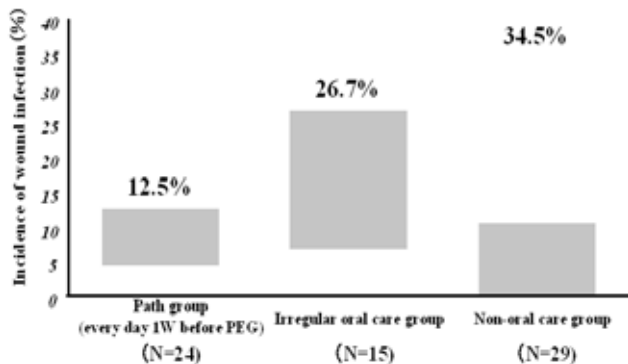


Fig. 2 The incidence of wound infection at the gastrostomy tube site by the frequency of professional oral health care before PEG treatment

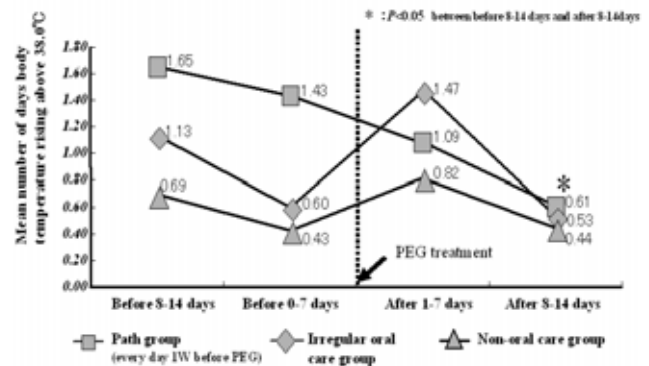


Fig. 3 Mean number of days body temperature rising above 38.0°C by the frequency of professional oral health care before PEG treatment

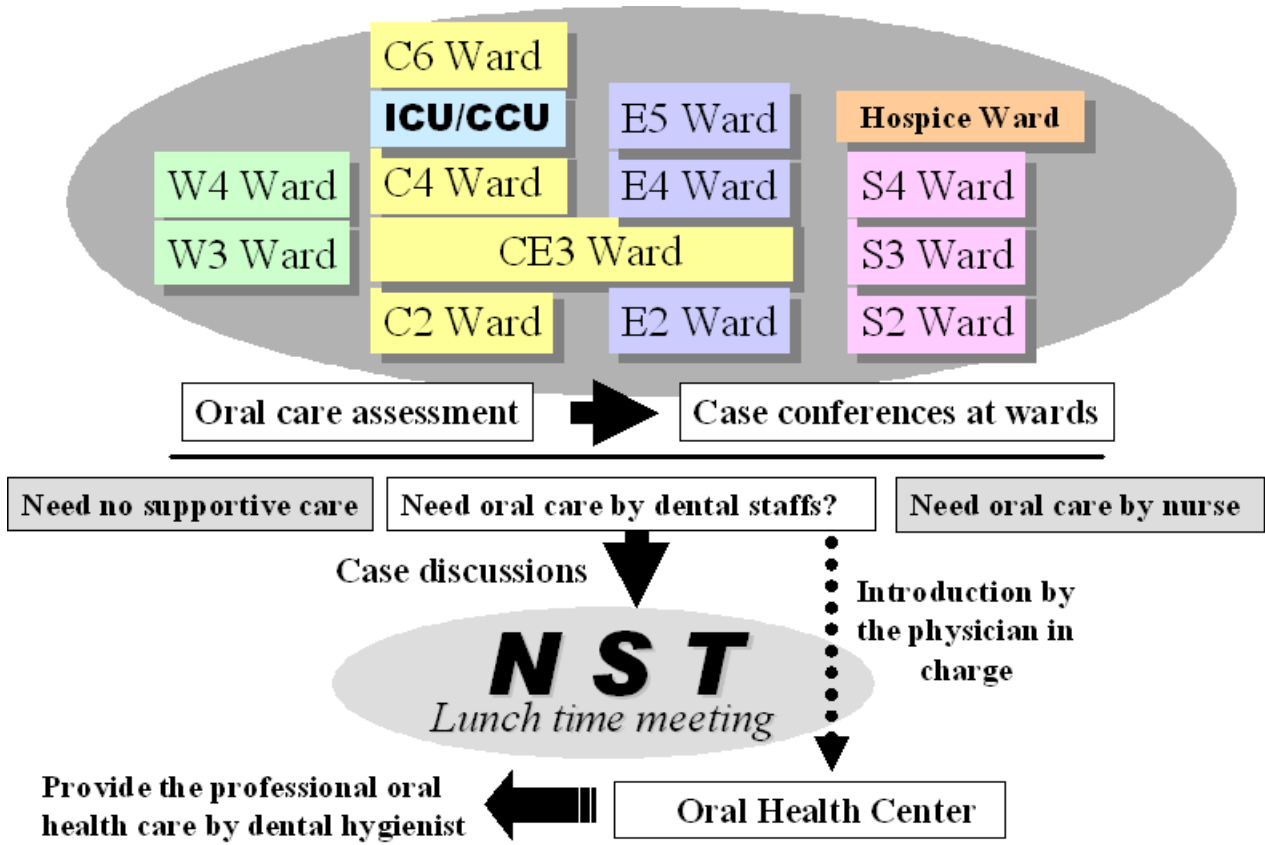


Fig.1 Oral care system at wards in Mitoyo general hospital –System of cooperation between the dental staffs and the other professionals