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## 臨床指導講演

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# Current Status of Dental Care for Patients with Disabilities in Tokushima Prefecture and Future Perspectives

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キーワード : current status of dental care for patients with disabilities in Tokushima Prefecture, specialists of care for patients with disabilities, community liaison networks, dental approaches for patients with dementia

**Abstract :** Twenty years have passed since our division (clinic of the challenged) was organized in our institution. During this period, we have been engaged in dental care for patients with disability, contributing to this area of special needs dentistry in Tokushima Prefecture. Although the situation has consequently improved, the service remains insufficient to treat all such patients in the prefecture. This review discusses the current statuses of individuals with disabilities in and outside Japan and dental care for them in Tokushima Prefecture, with future perspectives on the latter.

## I. Introduction

Twenty years have passed since our division (clinic of the challenged) was organized in our institution. During this period, we have been engaged in dental care for patients with disability, contributing to this area of special needs dentistry in Tokushima Prefecture. Although the situation has consequently improved, the service remains insufficient to treat all such patients in the prefecture. This review discusses the current statuses of individuals with disabilities in and outside Japan and dental care for them in Tokushima Prefecture, with future perspectives on the latter.

## II. Current status of individuals with disabilities

### 1. Global tendencies

In 2011, the World Health Organization (WHO) and World Bank published the <World Report on Disability> to provide rough data on a global basis for the first time ever<sup>1)</sup>. According to this report, more than 1 billion individuals, accounting for approximately 15% of the global population

(based on an estimate in 2010), lead their daily lives in the presence of some disability. This value is higher than those previously estimated by the WHO; the rate was estimated at approximately 10% in the 1970's. As factors associated with such a global increase in the rate, the progression of aging (as the risk of disability is higher among the elderly) and a chronically poor health status involving disability due to diabetes, cardiac diseases, or mental disorders has been noted.

### 2. Status in other countries

In other countries, the rate of individuals with disabilities is as follows: Australia (13%)<sup>2)</sup>, Canada (10%)<sup>2)</sup>, India (1.8%)<sup>2)</sup>, Indonesia (3.5%)<sup>3)</sup>, South Korea (2.4%)<sup>3)</sup>, China (5%)<sup>3)</sup>, the Philippines (4.4%)<sup>4)</sup>, Malaysia (6.9%)<sup>4)</sup>, Mongolia (4.8%)<sup>4)</sup>, the USA (14.5%)<sup>5)</sup>, Belgium (8 to 10%)<sup>6)</sup>, Greece (8%)<sup>6)</sup>, the Netherlands (11%)<sup>6)</sup>, Portugal (6.4%)<sup>6)</sup>, and Spain (6%)<sup>6)</sup>. Although it is inappropriate to simply compare the values, as the definition of such individuals and methods to examine them vary among countries, their rate tends to be higher in

European countries, the USA, and OECD members, and lower in Asia, particularly developing countries.

### 3. Status in Japan

In Japan, the Basic Act for the Disabled defines individuals with disabilities as ‘those who face marked limitations in their activities of daily living for a long period due to physical impairments, intellectual disabilities, or mental disorders’. Based on the Annual Report on Government Measures for Persons with Disabilities in FY2013<sup>7)</sup>, the number of individuals with each type of disability is as follows: physical: 3,663,000 (29 per 1,000 population); intellectual: 547,000 (4); and mental: 3,201,000 (25). In short, approximately 6% of all Japanese citizens have disabilities.

According to a handbook for the welfare of individuals (children) with disabilities issued by Tokushima Prefecture in FY2015<sup>8)</sup>, the number of individuals with each type of disability in the prefecture is as follows: physical: 38,000 (50 per 1,000 population); intellectual: 8,000 (10); and mental: 4,000 (5), indicating that approximately 7% of all residents of the prefecture have disabilities.

## III. Current status of dental care for patients with disabilities in Tokushima Prefecture

### 1. Institutions specializing in dentistry for patients with disabilities

In Tokushima Prefecture, the following institutions specialize in dental care for patients with disabilities: Tokushima University Hospital<sup>9)</sup>, Dental clinic with disabilities, Oral Health Center, Tokushima dental association<sup>10)</sup>, and Tokushima Prefecture Red Cruz Hinomine Center for Children with Special Needs<sup>11)</sup>. Table 1 shows the year of foundation, location, and annual number of patients in each institution. The calculation of patients treated in these facilities account for approximately 10% of all individuals with disabilities in the prefecture.

### 2. Distribution of patients

On examining the distribution of patients with disabilities treated in the clinic of the challenged, Tokushima University Hospital (Figure 1), more than half of such patients live in Tokushima City<sup>9)</sup>. Their number is lower in the western and southern areas of Tokushima Prefecture, such as Miyoshi City and the Kaifu County, respectively. As most institutions specializing in dental care for them are located in Tokushima and Komatsushima Cities, dental services for people with disability are likely to be insufficient in other areas of the prefecture.

### 3. Number of dentists certified as specialists of care for patients with disabilities

The Japan Society for Disability and Oral Health certifies dentists specializing in care for patients with disabilities. The number of such dentists in each prefecture of the Shikoku area is as follows: Tokushima (9), Kagawa (10), Ehime (8), and Kochi (2). In contrast, there are 186 certified dentists in Tokyo. Per 10,000 individuals with disabilities, there are 1.8 and 3.8 certified dentists in Tokushima and Tokyo, respectively, highlighting insufficiency in the former.

### 4. Types of disability

On examining the distribution of disabilities among patients treated in the clinic of the challenged, Tokushima University Hospital (Figure 2), autism is the most frequent disability, followed by intellectual disabilities and cerebral palsy, in this order, and these collectively account for more than 50% of all disabilities<sup>9)</sup>. In the Dental clinic with disabilities, Oral Health Center, Tokushima dental association<sup>10)</sup>, autism (30%) and intellectual disabilities (26%) account for the majority, while cerebral palsy (51%) is observed the most frequently and followed by intellectual disabilities (8%) at the Tokushima Prefecture Red Cruz Hinomine Center for Children with Special Needs<sup>11)</sup>. In short, most patients receiving dental care in the prefecture have physical impairments or intellectual disabilities, and on the other hand mental disorders (particularly dementia) are rare among them.

### 5. Current status of dementia

The risk of care dependency increases with age. According to the Comprehensive Survey of Living Conditions in FY2013 (Ministry of Health, Labour, and Welfare), dementia was the second leading cause of care dependency, following cerebrovascular disease in that year. The research group estimated the number of elderly individuals with dementia at 4,620,000<sup>12)</sup>. Based on this, the prevalence of dementia markedly increases with age, as the disease is present in nearly 40% of those aged 85-89 and more than 60% of those aged 90 or over.

The presence of dementia negatively affects personal hygiene behavior. In such cases, oral hygiene becomes poor, resulting in a higher incidence of dental caries compared with that among healthy individuals<sup>13-15)</sup>. Periodontal disease also frequently develops in patients with dementia<sup>14-18)</sup>. On comparing the elderly with and without moderate dementia, the former have been reported to need specialized oral care, caries treatment, and that for periodontal disease more frequently<sup>19)</sup>. This indicates that the risk of dental diseases is higher among those with moderate dementia and a higher number of remaining teeth, whose oral hygiene behavior is

Table 1 Current status of dental care for patients with disabilities in Tokushima Prefecture

	Tokushima University Hospital	Oral Health Center	Hinomine Center
The year of foundation	1 9 9 7	1 9 8 6	1 9 8 4
Location	Tokushima City	Tokushima City	Komatsushima City
Annual number of patients	1 8 0 0	2 7 0 0	1 0 0 0

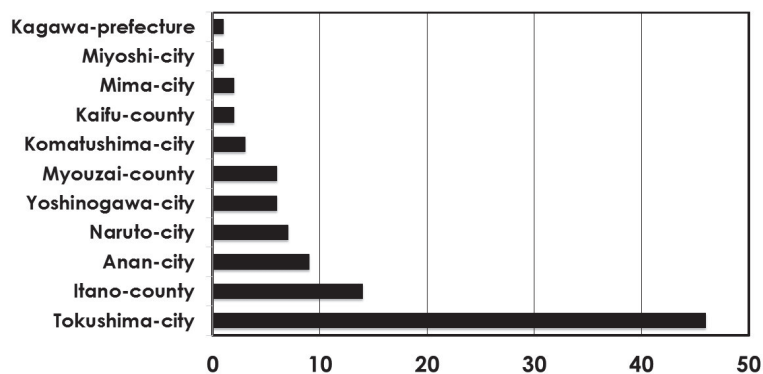


Fig. 1 The residence of the patients receiving clinic of the challenged

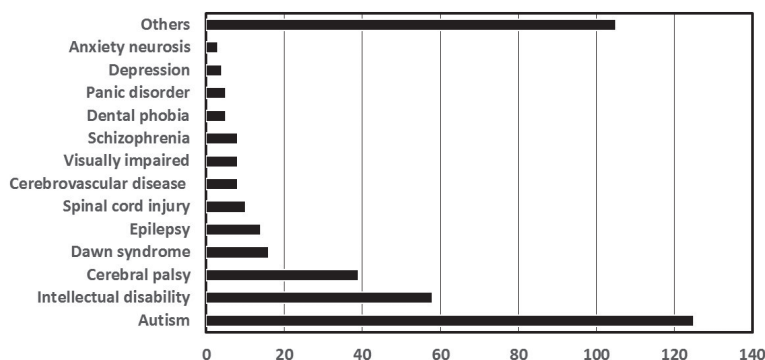


Fig. 2 The distribution of disabilities among patients treated in the clinic of the challenged

limited to self-care. Periodontal disease and cervical caries may also simultaneously develop in those with mild dementia, whose levels of understanding and communication are relatively high, as their self-care tends to be insufficient due to reduced spontaneity, manual dexterity, and visuospatial functioning.

#### IV. Future perspectives

##### 1. Nurturing dentists certified as specialists of care for patients with disabilities

As previously mentioned, the number of dentists certified by the Japan Society for Disability and Oral Health is lower in Shikoku compared with other areas of Japan. To become a certified dentist, it is necessary to become a member of the

society, but the number of such members is also lower in the Shikoku area. With the aim of promoting membership, the Shikoku Promoting Conference for Disability and Oral Health was launched as a community-based organization related to the society to hold a lecture meeting once a year, and enhance awareness of dentistry for patients with disabilities. As there is no admission or annual membership fees, it is easier to encourage dentists to become a member of this organization. For members showing interest in dentistry for patients with disabilities, necessary training will be provided.

##### 2. Developing community liaison networks

General dentists are not familiar with dental care for patients with disabilities. This results in the concentration

of patients, including those in need of post-treatment care (such as care for mild disabilities and oral care) that can be sufficiently provided by general dentists, into oral health centers and university hospitals, making it difficult for patients requiring high-level treatment to make appointments in these institutions.

To resolve such a situation, community liaison networks for oral health centers and university hospitals to introduce patients needing post-treatment care to local dental clinics should be developed.

It may also be necessary to promote liaison between university hospitals and oral health centers, in order to enable patients with difficulty in receiving treatment under normal conditions at the latter to be treated under general anesthesia at the former.

### 3. Establishing dental approaches for patients with dementia

In 2015, the Ministry of Health, Labour, and Welfare established a plan, containing comprehensive strategies to promote measures to manage dementia (New Orange Plan), and specifying the necessity of training dentists to improve their skills to manage dementia<sup>20</sup>.

For patients with dementia, it gradually becomes difficult to adapt to environments by changing their own behavior. With the progression of the disease, the provisions of dental treatment and specialized oral care also become difficult. Therefore, it may be important to provide dental intervention continuously and periodically in the early stages. The development of treatment protocols in consideration of the possible course of the disease, as well as the flexible management of subsequent symptomatic changes, is also necessary for such patients. In this respect, understanding their primary diseases and neuropsychological symptoms, and developing treatment and continuous care plans for them may be essential.

### Acknowledgment

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