

Dentistry for Special Patients in Japan

HIROSHI KASAHARA

Department of Dentistry for the Handicapped, Matsumoto Dental College

(Chief : Prof. H. Kasahara)

Introduction

Who are the Special Patients?

Who requests most earnestly healthy teeth in the world? Few small cavities might not be counted among as a disease for normal adults. Although for young children, weak elderly and severe handicapped persons, the meaning of dental health should be recognized as a much serious matter. Neglected dental diseases often give them much pain and trouble. And yet, sometimes severe infection following dental diseases may threaten their life. Dentists should become aware of great value of dental health for these persons and provide the best care to them with the first priority.

But, there are several difficult problems in actual dental service to these patients. Ordinary dental procedures are hardly able to perform to extremely uncooperative patients. Young children and some of the handicapped persons with mentally disturbance including infantile autism, severe mental retardation and dementia, often can't realize why they have to receive dental treatment. Until their mental abilities have developed over 3 years old level, they shouldn't be expected to communicate well with dentist. Sometimes the mother brings the patient to dental clinic by force, then he or she should cry and resist hard against even only a simple oral examination. It is so difficult to control such patient's behavior as most practitioners know. Fine and precise dental procedures are hardly carried out in uncooperative patient's mouth.

For many years, conventional dental care system has developed for normal adult patients. In ordinary dental clinic, patients used to open mouth widely and keep standing still during the dentist working. Twenty years ago, most of Japanese dentists didn't know how to manage uncooperative patients appropriately. They tried to control the patients by force and with various physical restraints. When the patient was young and weak infant, the dentist could suppress him or her easily. But he couldn't control powerful adolescence or adult with mental disabilities. Consequently, many dental clinics did shut out remarkably uncooperative patients in those days.

The other serious problem has been lying in medically compromised patients. Dental practitioners are apt to decline these patients too. Sometimes the author met miserable cases. Some of the cases were children with severe congenital heart diseases. Most of them suffered neglected extensive dental caries. In spite of infections following dental diseases are very dangerous in these cases, they could hardly get a chance of adequate dental care. As the other examples, so-called "the bedridden elderly" are often left with untreated dental diseases and chewing disabilities.

Dentists should become aware of the importance of dental health in these people. However,

Table 1 : Who are the Special Patients?

The Special Dental Patients are :

those who require special care for dental health maintenance and dental treatment.

They include young child, the elderly, the handicapped, medically compromised patient and so on.

Table 2 : Professorships of clinical dentistry in Japanese dental schools

Ordinary professorships of clinical dentistry

Conservative dentistry : Restoration, Endodontics

Periodontology

Prosthetic dentistry : Crown & bridge, Complete and partial denture

Oral surgery : Dental surgery, Maxillo-facial surgery

Orthodontics

Preventive dentistry

Dental radiology

Newer professorships of clinical dentistry

Pedodontics (Dentistry for children)

Dentistry for the handicapped

Geriatric dentistry (Dentistry for the elderly)

Community dentistry

Dental anesthesiology

Table 3 : An example of general educational objective in pedodontics (dentistry for children)

General educational objective in pedodontics at Matsumoto Dental College

1. The students should learn systematic growth and development in childhood, and understand relevancy the entire body and mastication system.
2. The students should learn mental development in childhood, and understand heart and body problems at dental clinic.
3. The students should learn child's oral cavity as a mastication system, and understand how to prevent, cure and restorate dental diseases and how to maintain good dental health.

Table 4 : An example of education system for pedodontics (dentistry for children)

Education system for pedodontics at Matsumoto Dental College

1. Undergraduate
 - (1) Lecture : 90 min.×15 times at 4th school year.
 - (2) Practical training on cast models and dummies : 180 min.×8 times at the first half of 5th school year.
 - (3) Chair side teaching and clinical training at the College Hospital : at the second half of 5th and 6th school year.
2. Postgraduate
 - (1) Immediate postgraduate course : 1 or 2 years, clinical training at the College Hospital as a intern.
 - (2) Resident course : 3 to 5 years, to get a board of the Japanese Society of Dentistry for Children.
 - (3) Doctor course : 4 to 6 years, to get a degree of Doctor of Dental Science.

dental treatments for them are often accompanied with high risk. Several years ago, a dental practitioner who lived in Kobe jumped from top of a building right after his patient with severe heart diseases died during dental treatment. It seemed essential to train dentists how to evaluate and manage such dangerous patients.

There are a lot of people who require special care in dental health maintenance and dental treatment. They are young children, the elderly, the handicapped, medically compromised patients

Table 5 : An example of general educational objective in dentistry for the handicapped*General educational objective in dentistry for the handicapped at Matsumoto Dental College*

1. The students should learn common mental and physical disabilities, and understand what is handicap and how to see handicapped person.
2. The students should study actual dental examination and treatment for handicapped patients to get reaffirmation that the object of dentistry is not "teeth" but "a human", and understand the importance of psychological approach to the patient and family, general evaluation and systemic medical care.
3. The students should study how to maintain dental health of the handicapped and other special patients, and understand the importance of primary medical care and hospital dental service as a community medical care system.

Table 6 : An example of education system in dentistry for the handicapped*Education system in dentistry for the handicapped at Matsumoto Dental College*

1. Undergraduate
 - (1) Lecture : 90 min. × 8 times at 4th school year.
 - (2) Chair side teaching and clinical training at hospital : at second half of 5th and 6th school year.
2. Postgraduate
 - (1) Immediate postgraduate course : 1 or 2 years, clinical training at the College Hospital as a intern.
 - (2) Resident course : 3 to 5 years,
 - (3) Doctor course : 4 to 6 years, to get a degree of Doctor of Dental Science.

and so on. Many dental practitioners and health workers call them "special dental patients".

It has been emphasized that dental education system should be improved to adjust to demands and needs of the special patients. In last two decades, several new professorships of clinical dentistry started one after another. They were dentistry for children (pedodontics), dentistry for the elderly (geriatric dentistry), dentistry for the handicapped, community dentistry and dental anesthesiology.

Development in Dental Care for Children

From '60s to '70s, as raising Japanese industry and economical development, children had taken much more sweet foods and drinks. Dental caries of them increased rapidly. At 1969, 87% of 3 years old infants had cavities, and average number of 'df' was 6.3. Although the first professorship of dentistry for children started at 1956 in Tokyo Medical and Dental University and the Japanese Society of Dentistry for Children founded at 1962, most of dental schools had no specialist and no educational program for children's dental care. In consequence, most of dental practitioners didn't know how to treat them in those days. Many young children suffered from toothache of neglected caries. Parents looked forward appropriate dental care for their children, but only few of them could get it. Their frustrations and complaints developed a big social problem, and many newspapers and TV programs give it a coverage.

The Japanese Government began to make efforts to improve children's dental health. At 1962, the Ministry of Health and Welfare carried on a system of dental check up and health instruction system for every 3 years old children. Soon most local governments started same system for one and a half years infants. They served for early detection of dental diseases and provided a chance to get more information to the mothers. And also, the administrator of national and social health insurance set up premium fees for children's dental treatments.

As a national project, an educational system had developed to train the dental practitioners who

were able to manage young children. Until middle of '80s, every twenty-nine dental schools of Japan established their own professorships of dentistry for children and educated dental students. Dentistry for children became one of the essential subjects of the national examination for the dentist's license.

As an example, table 2 shows the general educational objectives of dentistry for children at Matsumoto Dental College.

Undergraduate students are taught and trained with lectures, practices on dummies and chair-side teachings in the College Hospital. Some of them continue studying during post-graduate courses and continuous education systems. (table 2). The Japanese Society of Dentistry for Children has developed actively. It authorized the Japanese Board of Pedodontist for dentists who had completed a certain postgraduate course since 1988. Now, the members of the society are more than three thousand.

These systemic efforts have contributed considerably to improve young children's dental health. Especially, introducing dentistry for children into undergraduate dental education system as one of the essential professorships is bringing very useful fruits for Japanese children's welfare. Recently, most Japanese children can get primary dental care within their own communities. If necessary, they can look for specialists professing dentistry for children (pedodontist).

A national survey (fig. 1, 2 and 3) indicated markedly decreasing of untreated dental caries of deciduous teeth.

Development in Dental Care for the Elderly

The next problem of dentistry of Japan is to establish a dental care system for the elderly. At 1991, a national statistics officer reported that the average life span of Japanese were 76.11 years in male and 82.11 years in female. The population more than 65 years old amounted to about sixteen millions. Recently, the interest of the people is not only how to get long life, but also how to enjoy long life span. Dental health has been recognized as one of the essential factors to maintain high quality of life for the aged persons.

Japanese people used to say "aging come out on teeth, eyes and penis". Although aging was often realized weakened teeth as the beginning, many people believed it would be natural and abandoned their teeth.

The biggest dental problem among the elderly is extensive teeth loss by periodontal diseases and neglected dental caries. Figure 4 shows the rate of persons with missing teeth. Japanese people have been losing their teeth rapidly by aging. And figure 5 shows a fifty years old person had lost 9.0 teeth as average at 1976. At 1987, it decreased to 5.2, however, it was increasing about 12 at sixty years and more than 20 at seventy.

In the last decade, the Japanese Dental Association and the Ministry of Health and Welfare have been developing a big campaign, named "8-0-2-0". It means to maintain twenty teeth until eighty years old. At 1982, the Act for Health of the Elderly enforced by the Government. Every citizens more than 70 years old (65 with severe disabilities) became to be able to get medical and dental care by public cost.

Prosthetic dentistry have developed step by step. Many Japanese become to request dentures positively and use them. A good part of the cost is payable from social health insurance even for full denture. Figure 6 shows the state of dental prosthetics. At 1987, only 13% of the population left their teeth loss with no denture.

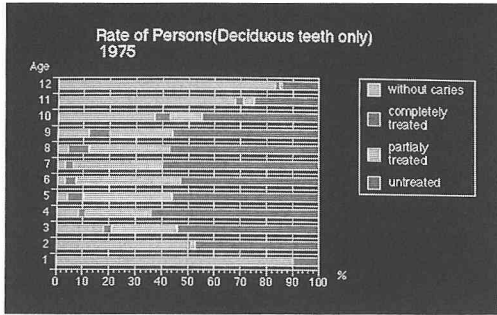


Figure 1

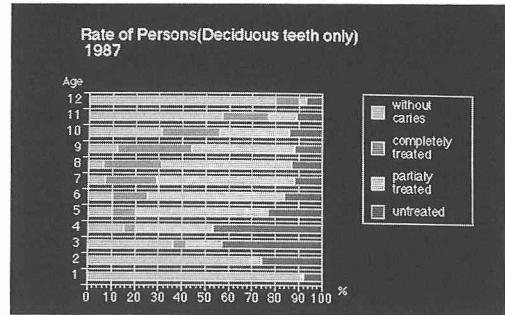


Figure 2

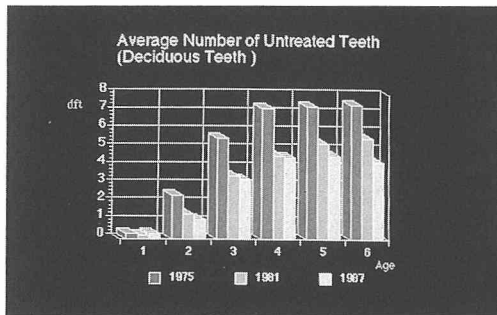


Figure 3

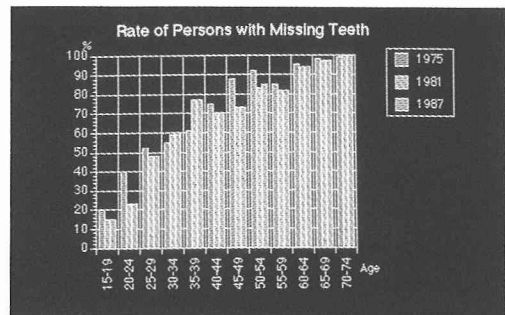


Figure 4

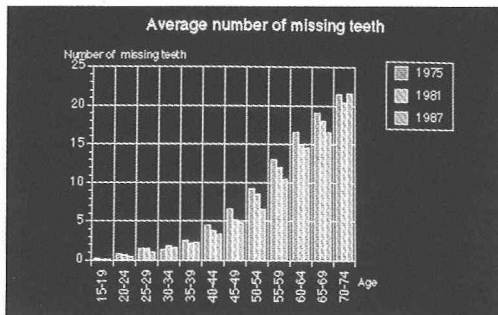


Figure 5

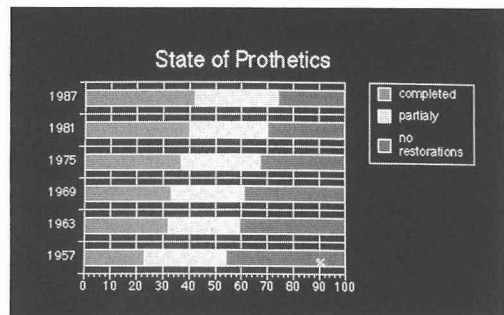


Figure 6

Many elderly suffered from various systemic diseases and/or mental disabilities. Some of them are severe and require full assistance even to their daily activities. Especially, so-called “the bedridden elderly” are one of big social problems in today’s Japan. They may also present special and often dangerous problems during dental treatment. The Government is developing a home visit dental care system in each local community. And dental schools are requested to train specialists for such special elderly patients.

In 1990, the first professorship of geriatric dentistry founded at Tokyo Medical and Dental University, and also the Japanese Society of Geriatric Dentistry started. People expect much from a rapid development in this field.

Matsumoto Dental College has no professorship of geriatric dentistry as most Japanese dental schools. However, the students are taught how to manage the elderly with severe medical and/or mental problems as a part of dentistry for the handicapped.

Development in Dentistry for the Handicapped

There are various handicapped persons who request special dental care. In former days, the handicapped meant only persons with mental disorders including developmental retardation, diseases of the mind and dementia, or with physical disabilities such as cerebral palsy. But recently, some fixed inner organ disfunctions, for instance heart failure, severe asthma and end-stage renal disease, have get citizenship as a physical disability by Japanese Government and communities. And also, persons with some infectious diseases including AIDS, hepatitis B and hepatitis C are recognized a new kind of the special patients.

Today's dental practitioners should acquire basic knowledge to manage the special patients in wide sense during undergraduate education system. In addition, the community health care networks which connect close the front dental clinics and hospital dental services have to be established.

The first professorship of dentistry for the handicapped was founded at Matsudo Dental School of Nihon University in 1979. The second one started at Matsumoto Dental College in 1982. In succession, Tokyo Medical and Dental University as a national dental school founded it in 1987. Now about a half of Japanese dental schools have the professorship or the clinic for the special patients in their hospital. The education system of dentistry for the handicapped is developing slowly but steadily.

As a professional society, the Society for the Study of Dental Care for the Handicapped was founded in 1973. It developed to the Japanese Society of Dentistry for the Handicapped in 1983. Now, it have about 2,000 members.

During the international ten years for the disabled started at 1981, the Japanese Government had also make several efforts to advance welfare of the handicapped people. As one of the political measures, many local autonomous bodies promote regional dental association with some bounties to improve dental service for the handicapped. And also, the administrator of national and social health insurance set up premium fees for dental treatments for the disabled patients.

In the consequence of development of dentistry for the handicapped, dental health of the handicapped has improved markedly. In an advanced area, a special training program for dental practitioners has set periodically up by the specialists. The dentists who have completed the course are given permission to express "counselor of dental care for the handicapped". They have acquired basic expertises and can manage the disabled patients within primary medical care. It should be essential for every persons, especially the handicapped, to establish primary health and medical care system in their own local community.

When a practitioner examines a disabled patient with serious difficulty such as extensive progressed dental diseases and severe medical complication, and he seems hardly to manage well within a dental office. the dentist may send him to a dental department of regional central hospital. In the hospital, specialists may treat dental diseases intensively, sometimes they apply deep sedation or general anesthesia if necessary. In a severe medically compromised case, a concentrated medical management by various health workers should be essential, the hospital dentists may look for consultation to other specialists such as internist, surgeon and anesthetist.

The community health care networks which connect close the front dental clinics and hospital dental services have demonstrated a big merit. After severe dental diseases were clear away in a hospital, it would be not so difficult to maintain dental health within primary health care. For

example, several institutions for severe disabled persons have realized “non cavity” practically by periodical dental check-up program.

Conclusion

Efforts to maintain a good dental health to the special patients have been not so easy. They present a serious challenge to the conventional dentistry. Now, a revolution in dental education system is in progress slowly but steadily. It would be expected to bring fruitful development of dentistry in the coming century.

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抄録：日本の特殊歯科医療

笠原 浩（障害者歯科学講座）

在来の歯科診療システムでは十分な対応が困難な一群の患者がいる。低年齢の幼児や重度の精神遅滞者には、治療処置への協力は期待できない。脳性麻痺などの肢体不自由者のなかには、安定した姿勢の保持や開口が困難な者がいる。重篤な全身疾患を合併した者や内部障害者では、不用意な治療侵襲は重大な危険を招きかねない。人口の高齢化の進行によって、寝たきり老人の口腔ケアも大きな問題となってきた。スペシャル・ペイシェントと呼ばれるこうした人たちの歯科的健康は、健常人たち以上に重要な意義がある。そこで近年では小児歯科学、障害者歯科学、高齢者歯科学など、新しい臨床歯科医学の領域が発展しつつある。個人開業医を主体とした第一線医療と病院歯科との有機的連携による地域医療の組織化も、この分野へ取り組みを通じて進行しはじめた。各歯科大学での学部教育にも積極的に取り入れられるようになり、めざましい成果が挙げられている。