Recent Trend for Integrated Management of Childhood Illness

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Abstract
The health problems of the children who will lead the next generation are a matter of global importance. In the Western Pacific Region alone, as many as 3,000 children die every day. The causes of these deaths are mostly preventable or easily treated illnesses. UNICEF and WHO have long since established preventative measures against every illness, and have eradicated or brought under control diseases like smallpox and polio. Subsequently, under the slogan “Health for All by the Year 2000”, a general primary health care initiative known as the Primary Health Care Program was developed, and the UN set the Millennium Development Goals, the fourth of which was to reduce the 1990 mortality rate among children under five by at least two thirds by 2015. Integrated Management of Childhood Illness is an integrated strategy designed to secure child health, and it is expected to produce results.

Key words Primary health care, Integrated management of childhood illness, Child health, Safe motherhood, Child survival, Millennium development goals

Introduction
In Japan, the total fertility rate is falling year after year, and, according to a recent report, stood at 1.29. As a result of the progress of medical care and improvement in sanitary environments, life expectancy is also growing longer every year, and Japan boasts the longest life expectancy in the world. The socioeconomic consequences of a society with a falling birth rate and aging population are, therefore, seen as a problem, and measures are being taken to address this problem.

On the other hand, other parts of the world, particularly Asia and Africa, which account for the majority of the world population, have a high fertility rate and a high mortality rate, and due to economic factors and political factors the gap between regions is growing wider and wider. The health of the children who will lead the next generation serves as an indicator of the welfare and development of a particular country, and UNICEF has made the Under-5 mortality rate (U5MR) an indicator of the degree of development of a country’s health situation. Improvement of U5MR is also stated as the fourth goal (MDG 4) of the UN Millennium Development Goals, and securing child health has become a matter of global importance.

Meanwhile, in November 1989 the UN adopted the Convention on the Rights of the Child, and proclaimed the Declaration of the Rights of the Child, saying that the health of a child must be secured not as something passive safeguarded by the state, but as the basic right of a child. To this end the global strategy of Integrated Management of Childhood Illness (IMCI) has been adopted since 1997.

Income Disparities, Regional Disparities and Health Disparities
Health problems are inversely proportional to the economic conditions of a particular country,
and are greatly influenced by the political situation and degree of priority given to health policy in a country. This is something that can also be said in the context of one country, and, as shown in Fig. 1, for example, if we compare the USMRs by income of Cambodia, the Philippines and Vietnam, we see that the lower the income bracket children are in, the higher the mortality rate, and in the high income bracket, even Cambodia registers a figure of 64 per 1,000 births, which puts it among the middle-ranking countries. This is a reflection of the fact that a difference in food & nutrition and living environment, and income disparities in terms of usage of primary health care facilities affect the mortality rate of children.

Similarly regional differences in a country are also a factor affecting the mortality rate (See Fig. 2). This is attributable not only to the fact that differences in living environment and differences in living habits between towns & cities and farming villages & mountain villages have an effect, but also to the fact that people cannot use primary health care facilities because they are inaccessible.

As shown in Fig. 3, the onset of illness is determined through an interaction of genetic factors and environmental factors, and among environmental factors, for children, the maternal environment at the fetal stage, food & nutrition nota-
bly breast milk at the infant stage and a sanitary living environment are particularly decisive factors. Everything to do with the mother, including the mother’s state of nutrition, perinatal infections, her lifestyle and her work affect the growth & development of the fetus via the placenta, umbilical cord and amniotic fluid. In other words, the prevention of illness and promotion of health in children will not be resolved simply by biomedical prevention or the improvement of medical technology, and it is clearly important to improve the living environment and improve the primary health care environment.

Causes of Infant Deaths (See Figs. 4 and 5)

The causes of deaths in children worldwide have begun to change in recent years. Figure 4 shows data released by WHO in 1997. Diarrhea, acute respiratory infection (ARI), measles and malaria account for 50%. In other words, half of infant deaths were caused by infectious diseases. On the other hand, perinatal disorders accounted for only 18% of the causes of infant deaths, but, according to 2003 statistics, this has risen to 33%. One factor behind this rise is an increase in records due to the fact that, led by UNICEF and WHO, safe motherhood programs and child survival programs in cooperation with the ODA and NGOs have increased and as a result institutional deliveries as opposed to home deliveries have increased. However, another factor is a reduction in the number of deaths resulting from vaccine preventable infectious diseases like measles, whooping cough and tetanus owing to the effectiveness of the expanded program for immunization (EPI). There is also a tendency for an increase in deaths caused by HIV/AIDS and accidental death.

Global Strategy for Infant Health

(1) Control strategies by illness

WHO and UNICEF have long since established preventative measures against single illnesses, developed and trained experts in such illnesses, and produced results. Smallpox, polio, TB and the expanded program for immunization are good examples of this. Smallpox has been successfully eradicated worldwide, and polio has been declared eradicated in North & South America and the Western Pacific Region. However, TB, Malaria and in recent years HIV/AIDS are still far from being under control let alone eradicated, and every country is struggling with their prevention. Particularly in relation to illnesses where there is an established method of control by vaccination, thorough going implementation of vaccination holds the key. However, in developing countries there are many problems such as the storage and quality control of vaccines, the transportation of vaccines to regional public health centers, the training of vaccinators and the enhancement of people’s awareness about sanitation, and it is no easy task.

(2) Primary Health Care (PHC)

It is a long time since the Alma-Ata declaration on primary health care was proclaimed in 1978. This clearly stated that it is difficult to solve health problems simply through improvement of medical care and public health, and comprehen-
sive measures including political, economic and social measures are necessary. The declaration was triggered by the fact that particularly in developing countries health problems had not been resolved simply through the introduction of modern medicine, while in industrially advanced nations sophisticated state-of-the-art medical technologies and industrial technologies had not only promoted people’s physical and mental health, but, conversely, had also brought about an increasing deterioration in the living environment and increasing health threats. In this context, with the global common goal of “Health for All by the Year 2000”, the declaration is a theory to promote health incorporating components such as appropriate technologies & methods that are not only medically justified but also socially valid, the development & utilization of regional human resources and resources, resident’s needs & equity, and cooperation with other fields. Therefore, there have been diverse programs for the practice of PHC covering education about public health and sanitation, safe drinking water supply and improvement of basic sanitation, improvement of food and nutrition, maternal and child health, family planning, vaccination and prevention of infectious diseases, and essential drugs, and each program has produced its own results.

(3) Integrated Management of Childhood Illness (IMCI)

In view of MDG4 (reduction of the 1990 infant mortality rate by at least two thirds by 2015), which came after the Year 2000 goal, when establishing the next strategy for PHC, WHO and UNICEF reevaluated the public health care indicator data to date and investigated the illnesses and health problems of children worldwide. Based on their findings, for example, that food & nutrition problems, living habits and living environments are related not only to the development of children but also to the onset and exacerbation of virtually all illnesses, and that quality control, storage and distribution systems of essential drugs, access to public health facilities, national/regional priority issues and budget allocation require close cooperation to implement, integrated management (IMCI) with effective utilization of limited human resources and resources for diagnosis, treatment and prevention to secure children’s health was proposed and deployed worldwide. This comprises clinical IMCI, which consists of checklists and flow charts that allow diagnosis and treatment guidelines to be put together easily on a first line level as well as the appropriate distribution of essential drugs, and community IMCI, which includes the creation of a referral system for transferring serious cases.
to secondary facilities, a patient follow-up and advisory system in the community, food & nutrition guidance, health promotion, expansion of vaccinations and sanitation education programs.

However, since IMCI itself is a strategy and not a specific program, some countries and regions where guidance was not specific enough lagged behind. Also some countries that are not economically wealthy were unable to develop effective programs due to budget restrictions. As a result, many countries have emerged that have no prospect of attaining MDG4 by 2015. These are disparities in U5MRs resulting from the regional differences and income gap described earlier, and revision of the IMCI strategy itself from the perspective of equity is now necessary.

In May 2005 UNICEF and WHO divided countries and regions into three groups based on factors such as U5MR, infant mortality rate, maternal mortality rate, causes of infant deaths and GNP (See Table 1) and discussed the strategy of incorporating into the primary health care interventions program a means of selecting the essential package plus an optional program according to the situation. As shown in Table 2, the essential package consists of the importance of perinatal particularly neonatal care, complementary feeding and micronutrient supplementation following exclusive breastfeeding, expansion of the six basic vaccinations, case management including follow-up guidance for ARI and diarrhea, malaria prevention and prevention of mother-to-child transmission of HIV. Options include deworming as an intervention from the perspective of nutrition, promotion of childhood safety, vaccinations for illnesses such as rotavirus, conjugate pneumococcal vaccine, haemophilus influenzae type 1b and hepatitis B, and the improvement of neonatal care facilities. These IMCI revisions have recently been announced and will be put into practice.

To produce results, it is important to properly understand the strategy and to put together specific programs. Cost effectiveness is also important, and IMCI requires not only cooperation between departments within health ministries such as the Child Health Division, Nutrition Division and Drug Delivery Division, but also cooperation with other fields like education, agriculture and fisheries and industrial distribution is also necessary. Monitoring and follow-up as part of case management also requires cooperation with NGOs. Nepal’s TB and Lung Health Project applied the DOTS strategy for TB and, to prevent children’s ARI on a local level, third-day follow-up by female community health volunteers and on-the-spot advice and guidance using check lists and flow charts were provided. The outcome was a treatment rate for influenza of 87.3%. Integrated programs in collaboration with other fields in each region are what IMCI needs.

**Conclusion**

Children are a country’s riches. However, it is important that an environment allowing children to access and choose health care equally be created by countries and regions not from the perspective of protecting children and safeguarding their health, but as their basic right. The governing power of a particular country, the prioritization of medical policies, budget allocation and the leadership of health ministries are key factors, but it is necessary for international organizations and each country to effectively bring out their respective strengths and cooperate in promoting the health of children.
References