

An Attempt for Medical Management in a Remote Place by Systematization with using Personal and Family Cards and Computer

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Introduction

In Japan, there are still more than 1,800 areas without any doctors. Today to gain an equal opportunity for receiving medical care, technical improvement of medicine and modernization of medicine is the most important problems in Japan. So it is absolutely necessary for us to attempt systematizing medical management to save the number of doctors and expansion and to try following the change of distribution of diseases according the increase of old man, the increasing needs for medical care and to know the knowledge about hygiene.

The following attempts were performed at the remote area near the high mountain Mt. Tsurugi at northern part of Japan, where snow covers deeply in winter and most young men are out, because of there being no work other than agriculture as is shown in Fig 1 and Table 2. So in this area, doctors and nurses can not be hoped to stay all year arround.

Fig 1 KAMIICHI AREA



Table2 Kamiichi area extracted for examination

Village	Number of family	Population	Distance from Kamiichi Welfare	Public Hospital
Shirahagi (East)	109	630	17 km	
Shirahagi (South)	45	113	13	
Gomado	17	73	9	
Goio	28	112	9	
Ohiwa	149	679	9	
Total	348	1,607	—	

System of management of inhabitants

Our system consists mainly of two subsystems which connected each other deeply. The one is purposed to watch medical condition and to advise to inhabitants for long time. The other is purposed for emergency. It is needless to say that a thinly-populated district inhabitants want about medical staffs mainly to be taught the way to maintain and promote their health and what to do when emergency-patients occurs in deeply snow-covered season. I will explain the details now on.

Regional medical adviser

Local sanitary men play an important part. At such a remote area, nurse can not stay all year arround, we select men and women who are living and respected deeply from them and ask them the primary care for hygine. We call them as assistant-adviser for local hygine. At first we teach them the knowledge about hygine. These assistant-adviser arrange data on physical condition of inhabitants. They sometimes take care for emergency patient under the guide of doctor. They also teach inhabitants hygine and diet therapy, for example. We have meetings with them regularly in order to their works to be correctly and smoothly performed. At such meetings, we teach them the primary knowledge about medicine, home-nursing, emergency-care and so on. We also teach them a simple medical examination such as pulsus, blood pressure and rythmus of respiration.

Personal card and family card

The data about medical condition of each person was set as family and common data throughout the family is recorded at family cards.(Table3)

Table3 Items involving in "Family Card"
available to doctors and health nurses

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- 1) Composition of family
 - 2) Human relations among family
 - 3) Economic right owner
 - 4) Scale and distance of farm
 - 5) Condition of taking food
 - 6) Economic condition
 Income per year:
 - a) Agricultural income
 - b) Income paid dy working
 - c) Income gained by running shop
 - 7) Agricultural condition
 Forest, Rice field, Garden,
 Domestic animals, etc.
 - 8) Farming machinery
 - 9) Living condition

The family cards record the followings; the number of family, maritus condition, one gone far for a long time to earn money, economical condition, one who has economical right in the family, their mental relationship among family. We can use these cards even in an emergency. We recorded these items because economical condition and human relationship among the family are very important for taking medical care correctly. For example to know habitual condition, whether their living room is light or dark, dry or wet helps them to guide inhabitants. They also teach diet therapy for avoiding too much intake of salt or unbrockened food, for pregnant women and patients at home.

Personal cards are made at their birth and maintained throughout their life.(Table4)

Table4 Items involving in "Personal Card"
available to doctors and health nurses

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- 1) Day of birth
 - 2) Marital condition
 - 3) Number of child
 - 4) Condition of birth
 - 5) Past history
 - 6) CMI (Cornell Medical Index)
 - 7) PFT (Picture Frastration Test)
 - 8) X-ray (Chest)
 - 9) Urinalisis
 - 10) Length, Weight, Blood pressure, etc.
 - 11) Fatigues:
 Shoulder stiffness, Lumbal pain, Numbness of extrenities,
 Night miction, Exersional dyspnea, Sleeplessness, Dizziness, Fullness
 of stomach, Headache, Palpitation
 - 12) Blood examination
 - 13) Contents of guidance

At front face of cards, recorded their birth condition, hereditary and past history. Psychological condition is also recorded here because we experienced that too patient men are prone to suffer chronic ill.

Health control card

These personal and family cards are possessed by local assistant advisers and they use for their works. We divided the inhabitants into four groups according to their all-over medical condition. The first group consists of poor-medical conditioned men, who is necessary for close-observation such as old men, high risk-patients. The second group consists of men who are supposed to develop serious illness such as apoplexy or heart diseases. The third group consists of men who have past history of illness and relapse concerned. Among this group, there are after-operated patients, men who have suffered from nephritis, hepatitis, diabetes mellitus, and hypertension. The fourth group consists of healthy men. Hygiene assistant advisers teach them the good way of life and are engaged in treatment of emergency case according these cards. (Table5)

Table5 Items Involving in "Hygiene Card" available to regional medical advisers

1) Name and address	4) Guidance for daily life
2) Day of birth	5) Disposition of urgent case
3) Physical condition	6) General evaluation

When emergency patient happens, a hygiene assistant advisers telephone to their main hospital and doctor advise them an emergent treatment with reference to their cards. (Table6)

Table6 Major symptoms mentioned in "Emergency Card" available to regional medical advisers

1) Common cold	10) Myocardo infarction
2) Pneumonia	11) Heart failure
3) Tonsillitis	12) Apoplexy
4) Colitis	13) Transient ishemic attack
5) Acute appendicitis	14) Epilepsy
6) Acute peritonitis	15) Migrane
7) Acute abdomen	16) Acute gastritis
8) Convulsion	17) Neurogenic circulatory asthenia
9) Angina pectoris	18) Shock condition

We put these data into computer and new data are added 4 times a year according to physical examination. We cannot use enough computer at an emergency case until now, but it helps us greatly to treat with emergency patient.

Summary

We explained the medical system at Kamiichi town where is poor-populated region. The more large medical system is consist of a groups of such a poor-populated areas. At Kamiichi town, city-administration, public health center, doctor groups should take close contact to perform more effective medication. Until now the system for regional medication is generally accepted and reported, but this report deals especially with poor-populated remote areas.

At least, we think it is very important for us not to forget the happiness of regional inhabitants, because the more complex the system goes the more the system cannot work effectively.

The medical system for a local poor-populated area can be said to be unique compared with other system of society.