Survey on Provision of Cardiac Rehabilitation Service in Hong Kong

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Survey on Provision of Cardiac Rehabilitation Service in Hong Kong

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LAU ET AL.: Survey on Provision of Cardiac Rehabilitation Service in Hong Kong. The study aimed at examining the provision of cardiac rehabilitation service in Hong Kong in 1997. Twenty of the twenty-one returned questionnaires were analysed. Thirteen hospitals (65%) had a cardiac rehabilitation team with involvement of cardiologists, registered nurses and physiotherapists. Participation by other disciplines were variable. Only 2476 (5.74%) cardiac patients had participated in cardiac rehabilitation programme. Thirteen hospitals provided Phase I programme while only nine, five and three hospitals provided the Phase II, III and IV programme. Referral to community rehabilitation service was made by eleven hospitals. The limited provision and access of cardiac rehabilitation programme was demonstrated. Systematic review and establishment of cardiac rehabilitation programmes in hospitals and in the community with facilitation of referral should be done to enhance the management of cardiac patients. (J HK Coll Cardiol 2000;8:118-121)

Survey, cardiac rehabilitation service

Background

Cardiac rehabilitation service was rudimentary prior to 1992 when a green paper on Rehabilitation Policies and Services¹ was issued in Hong Kong. Interest and work was enhanced and pilot structured programmes developed. Subsequent to the two certificate courses in Cardiac Rehabilitation held by our group in 1994 and 1996, structured programmes had proliferated. However, the mode and extent of provision of cardiac rehabilitation service in Hong Kong had not been assessed. This study aimed at examining the service development in Hong Kong five years after the initiation of the first structured cardiac rehabilitation programme.

Method

In October 1998, a questionnaire consisting of 10 questions evaluating the cardiac rehabilitation services provision in the year 1997 was distributed to all hospitals including 28 public and 12 private hospitals in Hong Kong. The hospitals participated in the assessment on a voluntary basis. The returned questionnaires were analysed.
Results

Hospital and Patient Characteristics

Twenty-one questionnaires were retrieved with a returned rate of 52.5% (21/40). The data from one hospital was excluded from analysis because the hospital started operation only in 1998. All of the remaining twenty hospitals had admission of patients with the primary diagnosis of heart disease. The total number of heart disease patients for the 17 hospitals was estimated to be 42,270, as three hospitals failed to estimate the number of cardiac patients. Nineteen out of the twenty hospitals admitted patients with acute myocardial infarction. One convalescent hospital did not admit patients with the primary diagnosis of acute myocardial infarction. The total number of acute myocardial infarction patients admitted was 3,080, amounting to 7.3% of the cardiac patients.

Thirteen out of the twenty hospitals (65%) had either Intensive Care Unit or Coronary Care Unit for the management of acutely ill patients.

Cardiac Rehabilitation Service

Thirteen hospitals (65%) had a cardiac rehabilitation team. They are all public hospitals under the management of the Hospital Authority. Ten cardiac rehabilitation teams were established in major hospitals with Accident and Emergency Department and with either Intensive Care Unit (ICU) or Coronary Care Unit (CCU) set-up. Two convalescence or rehabilitation hospitals and one cardiac-thoracic hospital had a cardiac rehabilitation team.

The staff composition of the cardiac rehabilitation team is summarised in Table 1. All thirteen teams have cardiologists, registered nurses and physiotherapists as member. Other disciplines involved included dietitians and occupational therapists in eleven; medical social workers in ten; nurse specialists in eight; clinical psychologists in six, general physicians in four; surgeons and community nurses in two; family physicians, pharmacists, specialist in rehabilitation medicine and staff of patient resource centre in one.

Total number of cardiac patients that had participated in cardiac rehabilitation programme in 1997 was 2426 (5.74% of cardiac patients). All thirteen hospitals (65%) were able to provide Phase I in patient service. The number of hospitals providing out-patient services were remarkably less. Nine hospitals (45%) had Phase II programme, five hospitals (25%) had Phase III programme and only three hospitals (15%) could provide Phase IV programme (Figure I).

The number of patients participated in Phase I programme was 2156 (88%); Phase II programme was 512 (21%); Phase III programme was 210 (8.6%) and Phase IV programme was only 62 (2.6%).

Referral of patients for continuation of rehabilitation after discharge from the hospital based programme was initiated in ten out of the thirteen hospitals. Seven hospitals had referred patients to Patient Resource Centres. Six hospitals had referral to the Community rehabilitation Network, Hong Kong Society for Rehabilitation and Care for Your Heart (a Cardiac Patient Self Help Group) for phase III and IV rehabilitation.

Only four hospitals had routine referral to community-based rehabilitation programmes. Eight hospitals with cardiac rehabilitation teams did not refer patients to community-based programmes and all hospitals with no cardiac rehabilitation team did not refer patients for community rehabilitation. The reasons for non-referral reported were unfamiliarity with the community based organizations in six; unfamiliarity with the referral channel in five and provision of services by their own hospital or liased hospitals in three.

Table 1. The staff composition of the thirteen cardiac rehabilitation teams

<table>
<thead>
<tr>
<th>Service</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiologist</td>
<td>13</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>13</td>
</tr>
<tr>
<td>Registered nurse</td>
<td>13</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>11</td>
</tr>
<tr>
<td>Dietitian</td>
<td>11</td>
</tr>
<tr>
<td>Medical social worker</td>
<td>10</td>
</tr>
<tr>
<td>Nurse specialist</td>
<td>8</td>
</tr>
<tr>
<td>Clinical psychologist</td>
<td>6</td>
</tr>
<tr>
<td>General physician</td>
<td>4</td>
</tr>
<tr>
<td>Surgeon</td>
<td>2</td>
</tr>
<tr>
<td>Community nurse</td>
<td>2</td>
</tr>
<tr>
<td>Family physician</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>1</td>
</tr>
<tr>
<td>Specialists in rehabilitation</td>
<td>1</td>
</tr>
<tr>
<td>Patient resource centre</td>
<td>1</td>
</tr>
</tbody>
</table>
Discussions

Recommendations for cardiac rehabilitation by the local,1 United Kingdom2 and United States3 had defined rehabilitation as an intrinsic part of the management of all cardiac diseases and should be made available to all who would benefit.

Cardiac rehabilitation including explanation and understanding of the medical diagnosis and management is an integral part of good medical practice. More specific rehabilitation interventions including appropriate secondary prevention measures, exercise training, psychological support and behavioural modification are tailored to the needs of the individual patient. The delivery of cardiac rehabilitation and secondary prevention service to patients with various condition including uncomplicated or complicated myocardial infarction, recovering from myocardial revascularization, residual myocardial ischaemia, heart failure, serious arrhythmia and implanted cardiac pacemakers had evolved in the United States (U.S.) in the past three decades. In the 1980s, only 11% of patients following an acute coronary event have participated in formal rehabilitation programs4 while in the early 1990s, the participation rate in the U.S. was 38% and in Canada was 32%.5

The situation in Hong Kong demonstrated a very limited provision of service to cardiac patients as cardiac rehabilitation team was present in 13 (65%) hospitals that had returned the questionnaire. As a result, the number of patients that could benefit from the cardiac rehabilitation progress is remarkably low amounting to only 5.74%. Not all hospitals with CCU or ICU for management of cardiac patients with acute myocardial infarction had cardiac rehabilitation programme. Furthermore, the provision of out-patient rehabilitation and community rehabilitation was even more scarce. The spectrum of service and designation of co-ordinating staff to enhance seamless care and linkage to community based programme was grossly inadequate.

The underprovision of service by hospitals and community was limited by the lack of awareness, initiative and resources. There is also room for improvement for the service interfacing and referral to community based programmes.

Limitation of Study

The response rate was 50%. Those who had responded are probably organizations that are providing or are aware of the need for cardiac rehabilitation. The situation in hospitals that did not respond was unknown. This study does not provide a complete picture of the cardiac rehabilitation service in Hong Kong.
Overestimation of provision of service may be present. As validation of data could not be done, there may be inaccuracy in estimation. The proportion of the different category of patient had not been assessed.

**Conclusion**

The very limited provision and access of cardiac rehabilitation programme to cardiac patients in Hong Kong had been demonstrated. Those hospitals without a programme need to develop one and existing programmes need more funding so they can take on all cardiac patients who could benefit from rehabilitation. Early contact at the inpatient setting is the ideal time to commence effective rehabilitation and facilitate early discharge. The training for doctors and personnel involved in the process is mandatory for successful implementation of cardiac rehabilitation. Designation of co-ordinators to enhance referral and communication to provide a seamless care for the cardiac patient should be instituted.

In addition to traditional patient subsets (post myocardial infarction, coronary bypass surgery, percutaneous transluminal coronary angioplasty), the cardiac rehabilitation service should be made available to patients with coronary heart disease with or without residual ischaemia, heart failure, cardiomyopathies and other nonischaemic heart diseases, pacemaker or cardioverter-defibrillator implantation, post heart valve surgery, and cardiac transplantation. There will still be a long way to go to achieve rehabilitation and secondary prevention for all cardiac patients.

**Acknowledgement**

The participation and effort of the hospitals that had returned the questionnaire was very much appreciated.

**References**