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The Prevalence of the Elderly Patients of Rehabilitation Medicine Department

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Abstract : A study was done of the medical conditions of elderly patients attending the Rehabilitation Medicine Department, Siriraj Hospital from November 1994 to October 1995. The total number of visits made by patients over the whole year was 9,882, and the proportion of elderly patients (age > 60 years) was 2,501, a percentage of 25.31. The number of elderly patients was 1,127 and they were treated for 1,754 conditions (into 1,754 diagnosis). The patient's ages ranged from 60 to 104 years with a mean of 69 years. According to ICD-10 classification, the three most common systems involved were musculoskeletal, nervous organs, and cardio-respiratory, with a prevalence of 80.48%, 48.36%, 17.04% respectively. Conditions such as stroke, osteoarthritis and spondylosis comprised the more common causes of functional limitations and dependency. The number of visits around 2,627/3,068 visits per year is considered as the large workload in the neuromusculoskeletal unit. As we now have information about the diseases prevalent among the elderly, a programme, including personnel recruitment, equipment purchase, and required budget, can be accurately planned to meet the needs and well-being of these elderly patients.

เรื่องย่อ : ความชุกของโรคในผู้สูงอายุที่ภาควิชาเวชศาสตร์ฟื้นฟู

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สารศิริราช ๒๕๓๕; ๔๘: ๓๐๒-๓๐๗.

ทำการศึกษาถึงความชุกของโรคระบบต่าง ๆ ที่พบได้บ่อยในผู้สูงอายุไทย ที่มารับบริการที่ภาควิชาเวชศาสตร์ฟื้นฟู โรงพยาบาลศิริราช ระหว่างเดือนพฤศจิกายน ๒๕๓๗ ถึงเดือนตุลาคม ๒๕๓๘ พบว่ามีผู้ที่มีมารับบริการทั้งสิ้นจำนวน ๙,๘๘๒ ครั้ง (๔,๘๐๓ ราย) ในจำนวนนี้เป็นของผู้สูงอายุจำนวน ๒,๕๐๑ ครั้ง (๑,๑๒๗ ราย) คิดเป็นอัตราส่วนเท่ากับร้อยละ ๒๕.๓๑ (๒๓.๔๖) จากการคัดเลือกขอดผู้สูงอายุที่มารับบริการจริงตลอดปีได้เท่ากับ ๑,๑๒๗ ราย โดยมีสัดส่วนเพศชายต่อเพศหญิงเท่ากับ ๑ : ๒, อายุระหว่าง ๖๐-๑๐๔ ปี, อายุเฉลี่ยเท่ากับ ๖๙.๒๖ ± ๗.๕๗ ปี. ผู้ป่วยทุกรายจะได้รับการวินิจฉัยตาม ICD-๑๐. โรคระบบที่พบได้มากที่สุดสามอันดับแรก คือ โรคระบบกระดูกและกล้ามเนื้อ, ระบบประสาท, ระบบหัวใจและหายใจ เรียงตามลำดับโดยมีค่าความชุกเท่ากับร้อยละ ๘๐.๔๘, ๔๘.๓๖ และ ๑๗.๐๔ ในจำนวนนี้โรคอัมพาตจากหลอดเลือดสมอง, โรคข้อต่อเสื่อม และโรคกระดูกสันหลังเสื่อมพบเป็นอันดับต้น ๆ ซึ่งกลุ่มโรคเหล่านี้เป็นสาเหตุสำคัญที่ก่อให้เกิดการสูญเสียความสามารถในการช่วยเหลือตนเอง นอกจากนี้เมื่อศึกษาถึงภาระงานบริการที่ภาควิชาให้แก่ผู้ป่วยกลุ่มโรคระบบประสาท และโรคระบบกระดูกและกล้ามเนื้อตลอดระยะเวลา ๑ ปี จำนวน ๒,๖๒๗ ครั้ง จากภาระงานทั้งสิ้น ๓,๐๖๘ ครั้ง. ข้อมูลต่าง ๆ เหล่านี้จะช่วยก่อประโยชน์. ในการจัดเตรียมแผนงานในด้านบุคลากร รวมทั้งวัสดุอุปกรณ์ต่าง ๆ ให้เหมาะสมกับความต้องการของผู้ป่วยและเพื่อช่วยให้ผู้สูงอายุเหล่านี้มีสุขภาพที่สมบูรณ์แข็งแรงตามควรแก่สภาพ.

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INTRODUCTION

The increasing interest in the rehabilitation of the elderly is a timely response to a current major health care problem. The number of elderly people in Thailand is growing. From 1980 to 1990 the number of persons 60 years of age or older rose from 2.52 million to 3.48 million. This rapid growth in the geriatric population is expected to continue into the next century. The resulting prevalence of infirmities of the aged will become a heavy burden on our health care system and the social structure in general.

The main health problem of old age is chronic disease ; physical impairment and disability are common sequels. It is the task of geriatric rehabilitation to correct physical impairments whenever possible and to prevent or at least delay the onset of a major disability.¹ It becomes obvious that physically-impaired aged persons need rehabilitation as much as any age group even though the procedures may differ.

As informations of the prevalence of disease among elderly patients can be obtained from those receiving attention at our department, a programme, concerning personnel recruitment, equipment purchase, and the required budget can be projected to meet the needs of these elderly disabled.

Objectives

1. To find out what diseases are common

among elderly patients and to classify them into groups of diseases.

2. To develop a good registration system.

MATERIALS AND METHODS

All patients attending Siriraj Rehabilitation Medicine Department during November 1994 to October 1995 were registered. The diseases of the elderly (aged 60 years or over) were then, classified into groups according to the tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).

RESULTS

The total number of patient visits at the Department of Rehabilitation Medicine, during November 1994 to October 1995 was 9,882, of which the 2,501 (25.31%) were made by the elderly (aged > 60 years). Considered only all new cases in the whole year, it was 4,803, and 1,127 was the number of elderly patients. The ratio of male to female was approximately 1 : 2 (34.7 : 65.3). The mean age and standard deviation of both sexes was 69.26 and 7.57 years as shown in table 1 with a minimum and maximum age of 60 and 104 years, respectively. Most of the patients, (89%) were aged from 60 to 79 years as shown in table 2. The number of elderly patients was 1,127 and the number of diagnoses 1,754 diagnosis. The patients presented with a large number of diseases

Table 1. The mean and standard deviation of age of the patients

Population	Mean (yr)	Standard deviation (yr)
Male	70.06	8.07
Female	68.83	7.26
Entire	69.26	7.57

Table 2. Percentages of elderly patients classified according to age

Age (yr)	Proportion (%)
60-69	58
70-79	31
80-89	10
> 90	1

with some presenting several concurrently. The number of visits made by elderly patients classified according to the main disease systems or ICD-10 are shown in table 3. According to the ICD-10 classification, the three most common systems involved were musculoskeletal, nervous, and cardio-respiratory. Classification of the diseases into subgroups are shown in table 4, 5 and 6.

Table 3. Patients and patient visits classified according to diseases of the elderly patients in PM&R department during November 1994 to October 1995

Diseases	Number of patients no (%)	Number of visits
Musculoskeletal disorders	907 (80.48)	1728
Nervous system disorders	545 (48.36)	899
Circulatory disorders	123 (10.92)	173
Respiratory disorders	69 (6.12)	114
Cancer	39 (3.46)	60
DM	36 (3.19)	56
Others (no details)	35 (3.10)	38

Table 4. Patients and patient visits classified according to musculoskeletal disorders of the elderly in PM&R department

Disorders	Number of patients no (%)	Number of visits
Osteoarthritis	178 (15.79)	352
Knee osteoarthritis	137 (12.16)	277
Spondylosis	151 (13.40)	253
Shoulder pain and inflammation	99 (8.78)	225
Myofascial pain	90 (7.99)	226
Amputation	66 (5.86)	93
Deconditioning	64 (5.86)	89
Osteoporosis ± fracture	53 (4.70)	96

Table 5. Patients and patient visits classified according to disorders of the nervous system of the elderly in PM&R department

Disorders	Number of patients no (%)	Number of visits
Cerebrovascular disease	282 (25.02)	568
Nerve, nerve root, and plexus lesions	162 (14.37)	223
Carpal tunnel syndrome	87 (7.72)	117
Polyneuropathy	42 (3.73)	66
Traumatic brain & spinal cord injury	33 (2.93)	46
Parkinsonism	8 (0.71)	17
Dementia	7 (0.62)	25

Table 6. Patients and patient visits classified according to cardio-respiratory diseases of the elderly in PM&R department

Disorders	Number of patients no (%)	Number of visits
Essential Hypertension	54 (4.79)	75
Myocardial infarction	24 (2.13)	38
Heart failure	7 (0.62)	11
Pneumonia	29 (2.57)	43
COPD	23 (2.04)	51

DISCUSSION

This study was carried out to determine the prevalence of diseases commonly seen in the elderly in our Rehabilitation Medicine Department. We found that female patients came to see the doctor more frequently (about 2 times more than male patients). Maybe women are more concerned with health than men or women live longer than men. The two most common disease systems were musculoskeletal 80.48%, and nervous 48.36%. Rehabilitation specialists deal with physical disabilities and these two disease systems cause

limitations in function. Statistics from the USA, reveal that musculoskeletal diseases, including arthritis, comprise the most common causes of functional limitation and dependency.² In our study, osteoarthritis and spondylosis were 15.79% and 13.40% respectively. Both diseases represent degenerative processes which often occur in the elderly. Osteoarthritis is the most prevalent of the rheumatic diseases, particularly in elderly people.^{3,4} Physicians diagnose arthritis as a common problem among elderly people and it is associated with difficulties in their physical activity.⁵ Shoulder

conditions including tendinitis, capsulitis and frozen shoulders were also commonly detected (prevalence = 8.78%). Woo studied the prevalence and sites of musculoskeletal complaints in elderly Chinese and found that 19 to 41% of subjects complained of pain at various sites with a higher prevalence for women. The four most common sites involved, in order of frequency, were knee, upper back, ankle/foot and shoulder.⁶

Myofascial pain, usually the commonest musculoskeletal complaint of persons in active life, affected about 8% of the elderly. Sometimes cervical and lumbar spondylosis are the primary sites and especially in the elderly myofascial pain is referred. Amputation and deconditioning were almost equally common (5.86%, 5.68%). In the Rehabilitation Medicine Department, we have an orthotic-prosthetic unit, servicing amputees who needed any kind of prosthesis.

Deconditioning, the syndrome associated with other major illnesses especially immobilization, was detected and corrected by therapeutic exercise and early mobilization, so the patients did not get complications and finally could return home, as near normal as possible.

The problem of osteoporosis, another common chronic disease that affects elderly people, is more severe in women than in men. Primary osteoporosis is a major public health problem; an estimated 6 million persons were affected in the United States.⁷ It was costly and taxing on health care systems.

Among diseases of the nervous system, the prevalence of cerebrovascular disease or stroke (25.02%) was quite obvious. It was a major cause of disability in the elderly who needed rehabilitation to improve their functions. Approximately 20% of all patients who survived stroke would require

comprehensive rehabilitation services, involving physical and occupational therapies and occasionally, speech therapy.⁸ Its prevalence in the population is increasing because of enhanced survival of the growing elderly population. Stroke was the third leading cause of death in the United States.⁹ The prevalence of nerve, nerve root, and plexo-pathy; carpal tunnel syndrome and polyneuropathy were 14.37%, 7.72%, 3.73% (in order). Besides providing treatment, the department also performed electromyography which hopefully would help to diagnose those common neuromuscular pathology.

The prevalence of Parkinsonism in our study was 0.71%. Tison F, who investigated the prevalence of Parkinson's disease in a representative sample of the elderly population living in the Gironde department, France found a rate of 1.4% among 3,149 people over age 65.¹⁰ He found that age-specific prevalence ratios increased with age from 0.5% in the age group 65 to 69 to 6.1% in individuals over age 90, but our study did not analyse the disease as age-specific.

Dementia, in our study, was 0.62%, a very small amount when compared to a study from Japan. Komahashi et al found that the prevalence of dementia was 6.1%.¹¹ He was a neurologist and surveyed the prevalence in Ohira town with a total population of 26,712, 2,778 (10.4% of the total population) being elderly. In this study, our investigation of the prevalence of dementia was limited to the patients who came for rehabilitation, so it was less than in Komahashi's study.

The third common system was the cardio-respiratory system with prevalences of 10.92% and 6.12%. Siriraj Hospital has separate cardiac care and respiratory units. Patients needed rehabilitation after cardiac surgery and chest physio-therapy to prevent post-operative complications, promote

effective lung expansion and secretion drainage.

The number of patient visits indicates the workload that we bear treating these chronic diseases. There is a definite evidence of a heavier workload in the neuromusculoskeletal unit which has about 2,627/3,068 visits per year, so we need to develop a better system for handling these patients.

SUMMARY

According to the ICD-10 classification, the common disease systems of the elderly patients treated at the Rehabilitation Medicine Department were musculoskeletal, nervous, circulatory, respiratory, cancer, diabetes mellitus and others with pre-

valences of 80.48, 48.36, 10.92, 6.12, 3.46, 3.19 and 3.10% respectively. The four most common conditions were stroke, osteoarthritis ; nerve, nerve root and plexopathy and spondylosis. The number of visits for neuromusculoskeletal problems was 2,627 from the total of 3,068 per year. This information about the prevalence of diseases guides us in planning for personnel recruitment, equipment purchase, and required budget.

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