

# Principles of Managing Ill Health in Old Age

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## INTRODUCTION

**A**geing is the most pressing problem of this age<sup>1</sup>. With improved scientific understanding of the ageing process and developments in medical science the dream of longevity is turning into reality. Advent of life enhancing medications and combination of such compounds has opened new frontiers<sup>2</sup>. As a result old age has become an important health and social issue in most developed countries<sup>3</sup>.

By the year 2025, 12% of the world's population will be over 60 years and two thirds of this population will be in the developing countries of Asia, Africa and Latin America. Over the next twenty-five years, an astronomical increase in the elderly population is predicted for some Asian countries<sup>4</sup>. The health needs for this section of the population will be much greater. Frail elderly people, particularly those over 80 years, will require additional resources which are currently unavailable in these countries. In developed countries elderly patients occupy majority of general and acute hospital beds and similar trends will be soon be faced by developing countries like Pakistan. In the West, countries became affluent before their population aged and hence had resources and time to manage this change. Worryingly, in developing countries the population is growing old before economic stability and this transition has occurred in a far shorter period as compared to the western industrialised nations. The repercussion for this evolution is enormous.

Our knowledge of medicine is based on research in the younger or middle-aged population. For example the average age for heart failure patients is 76 years but average age in the trials for heart failure is 63. After the age of 60 the spectrum of diseases change and the branch of medicine that deals with elderly patients is called Geriatrics. This encompasses not only the clinical or rehabilitative processes but also the preventive and social aspects

of illness. Treating patients with a holistic approach is the key to managing older patients.

Elderly patients differ from younger patients in several ways. Higher level of pathology, chronic disease and disability is common and there are complex interactions of physical, mental and social problems which make management of older patients more complex. There is a close association between ageing and chronic disease<sup>5</sup>. Yet, in many developing countries the concept of chronic disease requiring long-term treatment for health preservation is unknown.

There are some basic principles of managing illness in old age<sup>6,7</sup> which need special consideration (Table 1).

Table 1: Ten principles of managing illness in old age

- Atypical presentation
- Late presentation
- Silent pathology
- Multiple pathology
- Presentation with Geriatric Giants
- Impaired immunity
- Polypharmacy & Iatrogenic disease
- Nutrition & Hydration
- Homeostasis
- Social presentation

### Atypical Presentations

Frail elderly patients may present to their doctors with generalised symptoms not specific for the presenting pathology. With advancing age symptoms become less localised and disease less symptom specific. This is in stark contrast to younger patients where symptoms are more localised. Where disease presents with diffuse symptoms different from its textbook description, it is generally termed 'atypical'. For example, falls are a common initial presentation to hospital when the main underlying pathology is infection.

### Late presentation

There are several reasons for late presentation of disease in old age. Confusion with symptoms of ageing is not uncommon. Patients accept symptoms of disease thinking that they are secondary to old age. Incontinence of urine may be secondary to an infection but may be accepted as part of age related changes by the patient. Atypical presentation of disease along with social isolation and cognitive impairment are just some of the reasons that make it difficult to recognise early symptoms of disease. Poor vision, hearing complications and mobility problems hinder accessibility to health services. Fear of hospitalisation and institutionalisation may well be partly responsible for many to delay seeking help for medical issues.

#### **Silent presentation**

In some patients disease may be completely devoid of its 'classical' symptoms e.g. patients presenting with painless myocardial infarction. However, true absence of symptoms is uncommon and the patient may present with non specific symptoms such as lethargy or inability to cope.

#### **Multiple pathology**

The traditional teaching of medicine has been on the unitary disease model where each disease is taught individually. However in frail elderly patients it is the combination of several pathologies which make the presentation complex and management more challenging. This aspect of dealing with old age makes it essential for the physician dealing with these patients to be a generalist. Involvement of the multidisciplinary team is essential in fulfilling the diverse needs for such patients.

#### **Geriatric giants: Immobility, instability, intellectual impairment and incontinence.**

Immobility, instability (falls), intellectual impairment (confusion) and incontinence (urinary) are the most common initial mode of presentation in elderly patients. In combination or in isolation, these problems could result from either an acute or chronic pathology. They overlap with symptoms of ageing and thus the initial presentation may mask the underlying pathology. It is essential to note that in many acute cases 'geriatric giants' are temporary and once the underlying pathology is treated these

symptoms disappear. In sub-acute or chronic problems fluctuation in these symptoms could be observed over a period of time.

#### **Impaired immunity**

Infections are common in old age and are a result of physiological changes related to ageing. The presenting symptoms of an infection may be less specific on presentation to hospital i.e. a patient may present with confusion when infection is the main diagnosis. Lack of pyrexial response to infection is well described in elderly patients which along with impaired inflammatory markers can lead to difficulty with diagnosis. Hence inflammatory markers such as increase in white cell count, ESR and temperature response could not be entirely relied upon to exclude infection when dealing with frail elderly patients. Impaired immune functions may have a bearing in other areas with increase in malignancy and decreased incidence of autoimmune pathologies.

#### **Poly-pharmacy in the elderly**

In the United Kingdom over 50% of prescriptions are for patients 65 years & over. Older patients benefit as much as young from secondary and primary prevention. Treatment and medications offer functional independence, improved quality of life and enhanced life expectancy.

However there are some basic rules of prescribing in old age Table 2. Non-compliance is the single most important reason for treatment failure. This problem could be attributed to cognitive impairment, poly-pharmacy or poor knowledge of disease and medicine. Side effects of medication i.e. urinary incontinence with diuretics and social isolation may also play an important role in poor drug compliance. On the other hand the ability of the body to handle medicine decreases with age due to change in liver and kidney functions, thus requiring proportional decrease in dosage. Increased sensitivity to some medications is well known and common examples include digoxin and warfarin. The elderly are also more prone to develop side effects from drug therapy as compared to younger patients. A significant proportion of elderly patients are admitted to hospital primarily

due to the side effects of medication and in some cases with disastrous results.

**Table 2: Special considerations for drug therapy in older people.**

- Multiple drugs are usually required
- Start at the lowest possible dose
- Slow titration is key to success
- Look out for deterioration with mobility
- Elderly are more vulnerable to adverse drug reactions
- Poor drug compliance is common
- More frequent assessment is required

### Nutrition and old people

With advancing age there is decrease in lean body mass and increase in fat content which leads to decrease in energy requirements. Age related changes in the gastrointestinal system leads to impaired absorption of micronutrients. Hence it is important that these patients should have increased nutritional density in their diet.

Older people are at high risk of malnutrition which generally goes unrecognised in the hospital setting where the emphasis is on treating acute illness. Chronic disease and poor nutrition go hand in hand. Good nutrition is as important for recovery from illness as life saving medications. Poor nutrition contributes significantly to impaired immune functions and lack of minerals and vitamins play a part in several pathologies such as osteoporosis and dementia.

Changes in visual acuity, hearing, arthritis, impaired mobility and tremor may make it difficult for the elderly to prepare meals or to adequately feed themselves. These problems along with cognitive impairment, depression and social isolation compound the problems of under nutrition.

### Oral Health of the elderly

Oral health should be considered as part of the general health of the aged. Poor oral health can increase the risk to general health and with compromised eating and chewing abilities, affects nutritional intake.

One of the major criteria is successful aging is maintaining a natural healthy functional dentition

through out life, including all the social and biological benefits such as aesthetics and comfort, the ability to chew, taste and speak.

However, the oral health of the elderly is far from optimal. Poor oral health among old aged people is an important public health issue and a growing burden to countries world wide. Most industrialized countries have information about the oral health status of old aged people where as such data are rare for developing countries.

### Homeostasis

Ageing is associated with reduction in total body water. Elderly patients find it difficult to cope with extremes of environmental temperature. Impaired perception to change in the environmental temperature is not uncommon in frail elderly patients. This leads to problems when there is sudden change in temperature and can lead to either hypothermia in cold weather or dehydration in a hot climate. The problem is compounded with medications which may have an effect on the regulation of temperature or the body's homeostasis e.g. phenothiazines and diuretics.

**Table 3: Issues which may alert health workers regarding high-risk elderly patients in the community.**

- Age over 80
- Living alone
- Bereaved / depressed
- Cognitive impairment
- Falls
- Malnourished
- Pressure sores
- Incontinent
- Inability to cope in the past

### Management considerations

Frail elderly patients require high use of medical facilities, high use of diagnostic facilities and longer length of hospital stay. They require increased use of rehabilitation and social service resources. A holistic view and use of multiple disciplines are essential for managing older patients in hospitals. Medical, psychiatric and social problems are interconnected and hence it is vital to have a multidisciplinary approach when dealing with them. There are several groups of patients who

would be classed as high risk if they have the combination of risk factors as detailed in Table 3.

Health care for the elderly in Pakistan is an important area. The first step towards improvement is awareness. Health professionals should be aware of the core principles of geriatric medicine. Healthy ageing and decreasing premature disability should be the focus for developing a better health service for older patients. A multi-prong strategy is urgently required in dealing with diverse issues facing the older population of Pakistan.

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