

Original Article

Prevalence of skin problems in elderly homes residents in Hong Kong

香港安老院中長者的皮膚患病率

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Skin problems are common among elderly and its importance is growing due to the aging population. Two hundred and fifty-seven elderlies staying in four elderly homes were visited and undergone screening of skin diseases in this study. The average age of the elderly was eighty-six. 55.6% of them had one or more dermatology diagnoses made during screening. There was no difference between male and female residents. The commonest problem was xerosis followed by onychomycosis.

老年人皮膚病甚為普遍，隨著人口老化問題更顯重要。本研究探訪了二百五十七位住在老人院的長者並篩選皮膚病患者。長者的平均年齡為八十六歲，其中 55.6% 有一種或以上的皮膚病。男女長者之間無明顯差異。最常見的皮膚問題是皮膚乾燥，其次為甲真菌病。

Keywords: Elderly, Hong Kong, prevalence, skin problems

關鍵詞：長者、香港、患病率、皮膚疾患

Introduction

Hong Kong's elderly population has been growing rapidly, similar to many developed countries. According to the Hong Kong government census, the population with age over 65 was 662,300 in year 1996 and 814,300 in 2004 with an increase

of about 23%. The percentage of population aged over 65 was 10.2% in 1996 and 11.9% in 2004.¹ The proportion of elderly people living in various elderly homes or hostels has also increased. In the New Territories East district alone, there are more than 190 homes for the elderly of variable sizes, either subsidised or not.²

Elderly people have a special spectrum of skin problems and deserve special attention. Problems faced by the elderly included : aging skin (intrinsic and extrinsic), decreased mobility, difficulty in seeking medical care, difficulty in application of medications, multiple comorbidities (e.g. diabetes mellitus, atherosclerosis, infections), drug or medication induced disorders, nutritional and

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hygiene problem, and neglect of their skin conditions.

Common dermatology diseases in nursing homes included xerosis, fungal infections and dermatitis/eczema according to previous studies.³ Senile xerosis is the most common and had been reported as up to 77% (Canada), 58% (Taiwan) 29.5% (Australia) and 28.9% (Denmark).^{3,4} The prevalence of pressure ulcers is estimated to be between 2.4-23% in long-term care facilities in the United States.³

Objectives

This study aims to estimate the prevalence of skin problems in elderly home residents in Hong Kong.

Methods

Three Care and Attention Homes (C&A Homes, for elderly who need personal care services, including supervision of medication or assistance with activities of daily living), and one self-financed elderly home in New Territories East were visited in February and March 2005. These four elderly homes were covered by the Community Geriatric Assessment Team (CGAT) of the Prince of Wales Hospital or Shatin Hospital. They were well established homes with number of resident ranged from about 70 to 250.

All residents present in their rooms in the homes at the time of visit would be approached, irrespective of presence of skin or any other medical conditions. They would undergo screening of skin disease with verbal consent. All area would be inspected if possible (except genital region, unless the patient was symptomatic) by the same single investigator and had the clinical diagnosis. The clinical diagnosis, patient's sex and age would be recorded. No other personal information would be included. Patients who refused participation or unable to consent would be excluded.

Results

Screening of skin problems were performed in four elderly homes (two of which were all female homes). The total number of elderly screened was 257 with 205 female and 52 male. The average age was 86, in the range of 69-99. One hundred and fourteen (44.4%) elderly had no obvious skin problems during the screening. The average age of those elderly with no clinical problems was 86.4. There was no significant difference in the age from those who had a diagnosis made.

The results of diagnosis made during the screening were listed in Table 1. Sixty-four patients had more than one diagnosis. The single commonest problem was xerosis, which affected about 18.3% of the elderlies. Patients were classified to having xerosis when there was excess dryness, polygonal scales and flakes or fissures. This was followed by onychomycosis then asteototic eczema. Dermatitis as a group was the commonest problem. Only symptomatic seborrhoeic keratosis and senile lentigo were recorded. The distribution of the 207 conditions from the 143 patients with one or more diagnosis was represented in Figure 1. The sex distribution of the major groups of skin problems was represented in Table 2. The *p* values were calculated using the Chi square test. There was no significant difference in all the categories.

Discussions

Xerosis is by far the commonest skin problem in the elderlies. It may then lead to pruritis, asteototic eczema and secondary infections. The excoriations may be extensive and sometimes misdiagnosed as scabies and lead to unnecessary treatment. Elderly patients often had difficulty in applying topical emollient or medication by themselves. Some of the nurses in the elderly home had paid great attention in helping the residents with the use of moisturizers and hence much reduce the severity of the problems. The ratio of elderly in Hong Kong with this problem in this survey was

Table 1. Common dermatology diagnoses in the four elderly homes visited

Diagnosis	No. of cases (total N=257)	Percentage (%)
Xerosis (excluding those with asteototic eczema)	47	18.3
Dermatitis	51	19.7
Asteototic eczema	17	6.6
Other eczema	14	5.4
Contact dermatitis	7	2.7
Venous or stasis eczema	7	2.7
Seborrhoeic dermatitis	6	2.3
Fungal infections	42	16.4
Onychomycosis	28	10.9
Tinea pedis	11	4.3
Tinea manum/cruris/corporis	3	1.2
Sores/ulcers	12	4.6
Venous ulcer	4	1.5
Pressure sores (all grades, all area)	8	3.1
Other infections	6	2.3
Common viral wart	4	1.5
Cellulitis (feet)	2	0.8
Others	49	19.0
Seborrhoeic keratosis	8	3.1
Senile purpura	5	1.9
Lichen simplex chronicus	4	1.5
Prurigo nodularis	2	0.8
Psoriasis	2	0.8
DM dermopathy	2	0.8
Corn	2	0.8
Bullous pemphigoid	2	0.8
Suspected BCC	2	0.8
Cutaneous horn	2	0.8
Guttate hypomelanosis	2	0.8
Senile lentigo	2	0.8
Miscellaneous	14	5.5

DM=diabetes mellitus; BCC=basal cell carcinoma

Table 2. Sex distribution of skin problems among the elderlies

	Male No. of cases (N=52)	% M	Female No. of cases (N=205)	% F	<i>p</i> value
No diagnosis	26	50.0	86	43.0	0.187
Xerosis	12	23.1	35	17.1	0.209
Dermatitis	13	25.0	38	18.5	0.196
Fungal infections	10	19.2	32	15.6	0.329
Sores/ulcer	2	3.8	10	4.9	0.549
Other infections	0	0	6	2.9	0.254
Others	10	19.2	39	19.0	0.555

less than that reported in USA and Taiwan but more than Japan (Table 3).³⁻⁵ Whether this reflected the difference in the choice of study population or level of care need to be further investigated.

Other eczematous condition were also common, the prevalence appeared to be more than that in both Taiwan and Japan,^{4,5} though less than the USA.³ Problems frequently encountered included stasis eczema (and sometimes ulcer) and irritant

contact dermatitis, especially in diapers area in those who were incontinent.

Superficial fungal infections including Tinea pedis and onychomycosis were the second major group of problems. All of the patients in this study were diagnosed only clinically. Some patients with onychomycosis were asymptomatic and did not considered it to be a problem. However, the prevalence of onychomycosis may be over-estimated as there was no laboratory confirmation.

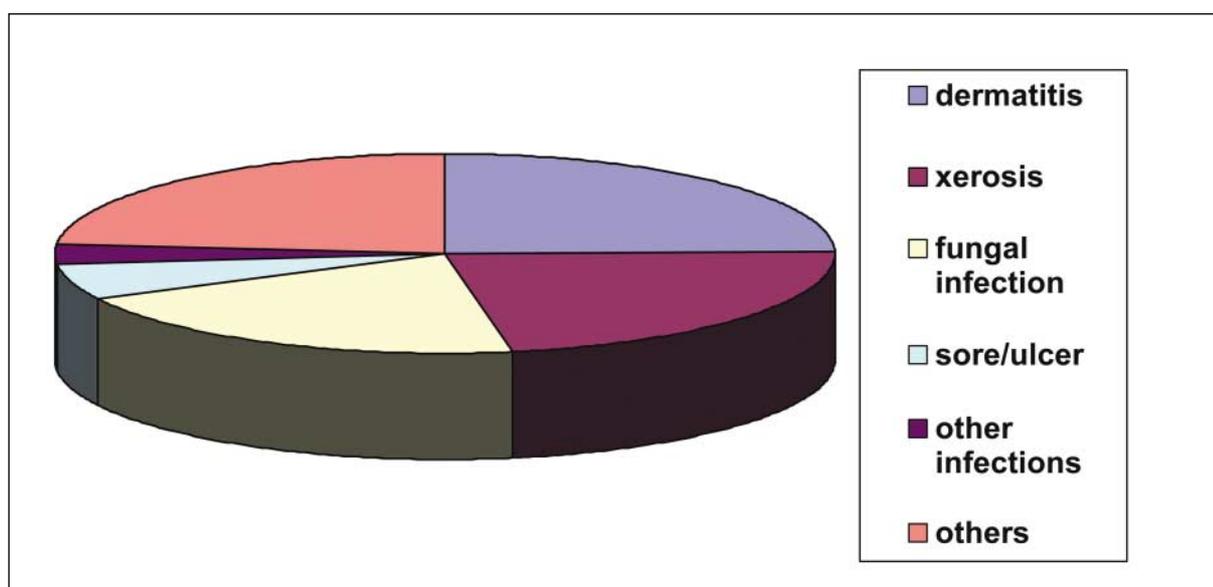


Figure 1. Distribution of skin conditions out of total 207 conditions in 143 patients with a diagnosis.

Table 3. Comparison of skin diseases in nursing homes in USA, Southern Taiwan and Central Japan³⁻⁵

Diagnosis	USA (n=1556)		Taiwan (n=398)		Japan (n=135)	
	No. of patients	%	No. of patients	%	No. of patients	%
Xerosis	772	49.6	232	58.3	2	1.5
Fungal infections (dermatophytes/ candidiasis)	151	9.7	245	61.6	6	4.4
Dermatitis*	569	36.6	29	7.3	2	1.5
Scabies	220	14.1	13	3.3		
Pressure sores	-	-	7	1.8	1	0.3
Skin cancers	353	22.7	1	0.3	-	-

* Including erythematous, contact and stasis dermatitis

The proportion of skin tumour cases was much less in this study than the data from the west as expected. The two patients who were suspected to have basal cell carcinoma were in poor physical state and refused biopsy or treatment. There was no case of scabies seen during the period of study. All of the elderly homes visited were very concern with this problem and had guidelines and alert system if suspicious case was identified. Seborrhoeic keratosis and senile lentigo were often regarded as 'normal' by elderlies and most were asymptomatic. The true prevalence was much underestimated in the current study.

There was a female predominance in the data. It was because two of the elderly home were all-female resident homes. Another reason was that female elderly in Hong Kong tend to have a longer life expectancy. However, there was no significant difference in the prevalence of skin problems in both male and female.

As we were only seeing elderly in residential homes of the C&A or nursing home levels, it probably represented the subgroup with poorer physical state. The order of common skin diseases in this study was comparable to those in Taiwan and USA.^{3,4} It is possible that the percentage of skin problems in the general elderly community would be different.

Limitations or pitfalls in the current study

During screening in the elderly homes, clinical diagnosis was made by a single investigator. There may be diagnostic pitfalls or misdiagnosis leading to potential errors and affect the prevalence estimated. This error may be reduced in future studies by inviting more than one investigator, or with additional investigations such as microscopy or histology.

Certain asymptomatic conditions were underestimated. Genital conditions would be one

category as it was difficult to expose each patient fully during screening if they denied any symptoms. Only symptomatic pigment problem and seborrhoeic keratosis was documented.

The elderly homes visited may not be representative of all elderly homes in Hong Kong. Not all residents in the homes could be seen during the visits. It might be due to various reasons: unable to obtain consent from the patient or relatives, patients were physically not available during the visit (they might be admitted to hospital, were having home leave, or taking bath or meal). The potential bias was that those with worse physical conditions might not be available. Also it would be better if there was a more even male to female ratio.

Conclusions

Skin problems are common in our local geriatric population living the elderly homes. 55.6% of them had one of more dermatology diagnoses made during screening. The commonest problems were xerosis, onychomycosis and various eczematous conditions. This may be a potential burden to the patients, their families and the community. It is important that general practitioners and family physicians are aware of these common geriatric skin problems and give proper advice, treatment or suitable specialist referrals.

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