Original Article

A study of Neoplastic skin disorder in geriatric patients attending a tertiary care center

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Abstract

Introduction: There is increase in the prevalence of benign lesion (24%) in the Geriatric patients with seborrheickeratoses being the most common. The prevalence of neoplasia varied between 6.9% and 74.5%. **Aims and Objectives:** To Study Neoplastic Skin Disorder in Geriatric Patients Attending a Tertiary Care Center. **Materials and Methods:** The study was conducted in the Department of Dermatology, Academy of Medical Sciences, Pariyaram, Kannur. 500 patients of age 65 years and above attending the outpatient department of Dermatology and Venereology at Academy of Medical Sciences, Pariyaram, Kannur over a continuous fixed period of 6 months. All patients attending the outpatient department of Dermatology and Venerology with the below criteria were included in the study. Age 65 years and above, Clinical evidence of cutaneous disorders, Willingness of the patient to participate in the study. Hospital based descriptive study .Relevant investigations were performed, wherever indicated, after obtaining informed consent. Statistical tests used included Chi square test. The data obtained was subjected to descriptive analysis using SPSS software. **Result:** Among 500 patients, young old males constituted 65.2% and young old females were 34.8%. Frail elderly males were 63.2% and frail elderly females were 36.8%. Extreme aged males were 57.1% and extreme aged females were 42.9%.Seborrheic keratosis was the most common benign tumor in thisstudy (83.4%). It was noted more frequently in the young old age group (81.4%). Squamous cell carcinoma was the most common malignancy noted (0.8%). It was more common in frail elderly age group. There were no malignancies noted in the extreme aged group. **Conclusion:** In our studyMost common neoplasm noted was seborrheickeratosis and Squamous cell carcinoma was the most common malignancy noted (0.8%). It was more common in frail elderly age group.

Key Words: Neoplastic Skin Disorder, Geriatrics, seborrheickeratosis, Squamous cell carcinoma.

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INTRODUCTION

There is increase in the prevalence of benign lesion (24%) in the Geriatric patients with seborrheickeratoses being the most common. The prevalence of neoplasia varied between 6.9% and 74.5%.[1,2,3]With increasing age, the body's ability to repair damage is decreased, resulting in greater risk of neoplastic growth[4] .The benign neoplasia include skin tags which are pedunculated polyps. Seborrheickeratoses are warty lesions with stuck- on appearance. They occur mostly in individuals above 50yrs. Sudden appearance of profuse painful seborrheickeratoses signifies the presence of an underlying malignancy-LeserTrelat sign.[5] Skin changes are among the most visible signs of aging.[5]With aging, the epidermis thins and cell turnover is decreased by 50%.Dermo epidermal junction flattens with age and lack of dermo epidermal cohesion may lead to tendency for bulla formation at the extremes of age. The main structural changes are observed in the dermis of aged skin. Dermal thickness decreases by about 20% and atrophy is present. The solubility and turnover rate of collagen decrease contributing to impaired wound healing. Degenerative changes in the elastic tissue occur. Sebum production decreases and overall volume of sub cutaneous fat tissue diminishes. Skin changes in elderly can occur in a setting of associated renal disease, thyroid disease, cholestasis, anemia, internal malignancy etc. Many elderly persons spend their time in nursing homes and assisted living facilities. Care givers and medical personnel can help decrease or prevent the development

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of many skin disorders in elderly by addressing several factors such as patient's nutritional state, medical history, current medications, physical limitations, mental state and personal hygiene. These factors helps us to detect, counsel, treat and protect them at an early age and they can grow old gracefully and live with the process of senescence with dignity.[6] Geriatrics which means care of the aged people is derived from Greek word geros-old man and iatros-healer. Definition in terms of chronological age usually include individuals of age 65 years and older, a group that is characterized by considerable variation in physiologic, mental and functional capacity. Sub groups of elderly include young old (65-74 yrs), old, frail elderly or aged (75yrs and older) and the oldest old or extreme aged (85 yrs and older).[7] Discoveries in medical sciences and improved social conditions during past few decades have increased human life span thereby leading to an increasing segment of geriatric population.[8]This group is noted to have characteristic group of dermatoses called as geriatric dermatoses. These may be expressed as cutaneous changes intrinsic to chronological aging. Alternatively there may be unrelated dermatoses having altered expression on geriatric skin.[9] Although rarely fatal, cutaneous disorders carry with them significant morbidity and potential to greatly decrease the patient's quality of life.[10] It is estimated that 7% of all physician visits by elderly involve skin disorders and that treatable cutaneous disorders occur in more than 50% of otherwise healthy older adults. [11]During next 50 years the elderly population is expected to double whereas total population is expected to increase by 35%. Thus elderly are expected to contribute to more than 20% of the total population by the year 2030. The gap between number of men and women widens in the older age group because life expectancy for men who reach age 65 is about 4 years less than average life expectancy for women who reach age 65.[7]

Both benign and malignant neoplasms have been noticed in the elderly population with increased frequency. Seborrheic keratosis, also known as seborrheic warts, is not related to seborrhea. It is the most common benign lesion. The cause is unknown, and lesions appear as brown or black papules that have a characteristic network of indentation or crypts on their surface; they have an abrupt edge that gives the appearance of plasticine stuck on the surface of the skin. Commonly affected sites are the trunk, face, and proximal extremities. Six subtypes of seborrheic keratosis have been described: dermatosispapulosanigra; stucco keratosis; inverted follicular keratosis; large cell acanthoma; lichenoid keratosis; and flat seborrheic keratosis. The sudden appearance of multiple multipleseborrheickeratoses ,Leser –Trelat sign is indicative of an internal malignancy, usually of an adenocarcinoma of the stomach. Seborrheic keratosis is easily removed by curettage, cryosurgery or electrosurgery.[12] Skin tags are common in the elderly; the common site is the neck and around the axillary folds. They are common mesenchymal tumors, often multiple, and usually 1-4mm in size. Small lesions are treated with electrodessication; larger lesions should be excised.[12] Cherry angiomas, also called Campbell de Morgan spots or senile angiomas, usually present as bright red or purple lesions mainly on the trunk or upper extremities. They could be left untreated, but if there is a cosmetic concern, they could be treated with electrocoagulation or laser coagulation. Both pigmented and non-pigmented malignant tumors of the skin are predominant in the aged population, probably due to lowered immunity and the harmful effects of ultraviolet light on their skin. The incidence of melanomas is increasing. This may be due to the decrease of the ozone layer, exposure to sunlight, outdoor activities etc. Protection against sunlight is vital to prevent melanomas. Malignant melanomas, particularly lentigomaligna, may occur in the elderly population and present as brownish or black plaques, with irregular borders and irregular pigmentation.[12] Basal cell carcinoma is the most common (nodular variety) but least malignant skin tumor. It is recognized by the pearly papules with rolled edges and telangiectasia. They also have a history of bleeding. Areas of the face, ears, scalp, neck and trunk are the most frequently affected. Squamous cell carcinomas (SCC) present as irregular growths with an indurated base. It is capable of local extension, regional lymph node metastasis and distant metastasis. Tumors are treated by excision; those that have spread beyond the skin would need a more radical approach. Other treatment protocols include electrodesiccation and curettage, cryosurgery, Mohs micrographic surgery, excision, radiation therapy and topical preparations. A multi disciplinary and collaborative approach remains the mainstay of therapy. Marjolin's ulcer historically represents SCC that proliferates or transforms from a chronic wound. These cancers traditionally are observed in pressure ulcers and in burn scars. The average latency between ulcer formation and documented malignancy is 30 years; the male-female ratio has been reported to be as high as 3:1. Most Marjolin's ulcers occur on the extremities; whereas, more than 90% of other epidermoid cancers occur on the face and neck. Keratoacanthoma is a condition that presents with an erythematous dome shaped, 1-10 cm nodule with a keratin plug in the center, mostly on the sun-exposed areas such as the face and dorsum of the hands. It is often considered to be a subtype of cutaneous squamous cell carcinoma. Squamous cell carcinoma

arising in keratoacanthoma has been found in 5.7% of cases. The incidence rises to 13.9% in patients older than 90 years. [12]

MATERIALS AND METHODS

The study was conducted in the Department of Dermatology, Academy of Medical Sciences, Pariyaram, Kannur. 500 patients of age 65 years and above attending the outpatient department of Dermatology and Venereology at Academy of Medical Sciences, Pariyaram, Kannur over a continuous fixed period of 6 months. All patients attending the outpatient department of Dermatology and Venerology with the below criteria were included in the study. Age 65 years and above, Clinical evidence of cutaneous disorders, Willingness of the patient to participate in the study. Hospital based descriptive study. All the patients were subjected to detailed history taking and meticulous examination in relation to age, sex and associated systemic diseases as per the proforma attached. The clinical manifestations in relation to geriatric dermatoses was recorded. Detailed systemic evaluation was carried out in each case. Relevant investigations were performed, wherever indicated, after obtaining informed consent. Statistical tests used included Chi square test. The data obtained was subjected to descriptive analysis using SPSS software.

RESULT

In this study, 500 geriatric patients of age 65 and above were included. Of them, males constituted 64.2% and females 35.8% of the total patients. Table 1 below shows the Age sex- wise distribution in the three age groups.

Table 1: Age - Sex wise distribution of Patients of Geriatric age groups

Sex	Young old (65-74 yrs.)		Frail elderly (75-84 yrs.)		Extreme aged (85 yrs. and above)	
	No.	Percent	No.	Percent	No.	Percent
Male	221	65.2	84	63.2	16	57.1
Female	118	34.8	49	36.8	12	42.9

Among 500 patients, young old males constituted 65.2% and young old females were 34.8%. Frail elderly males were 63.2% and frail elderly females were 36.8%. Extreme aged males were 57.1% and extreme aged females were 42.9%.

Table 2: Distribution of benign tumors among geriatric age groups

Benign tumors	Young old		Frail elderly		Extreme aged	
	No.	Percent	No.	Percent	No.	Percent
Seborrheic keratosis	276	81.4	115	86.5	26	92.9
Achrochordon	117	34.5	50	37.6	13	46.4
DPN	39	11.5	12	9	1	3.6

According to Table 2 , seborrheic keratosis was the most common benign tumor in this study (83.4%). It was noted more frequently in the young old age group (81.4%).

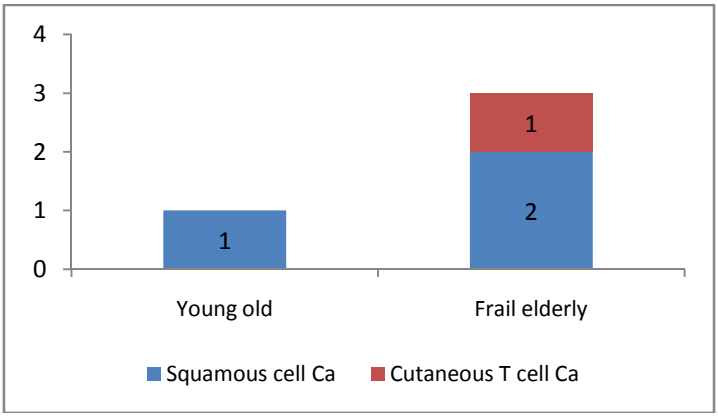

Figure 1: Distribution of Malignant tumors among geriatric age groups

According to Fig.1, squamous cell carcinoma was the most common malignancy noted (0.8%). It was more common in frail elderly age group. There was no malignancies noted in the extreme aged group.

DISCUSSION

We found (93.8%) benign neoplasia in our study which included seborrheickeratoses (83.4%) which was the most common skin tumor followed by achrochordons (36%) and dermatosispapulosanigra (10.4%). This was higher when compared to observations made by Pavithra S *et al* [13](80.5%) and Grover S *et al* [2] (74.5%). The incidence of seborrheickeratosis in various studies were from 24.2% to 74.5%. This higher frequency in elderly can be explained by carcinogenesis caused due to cumulative effect of sun exposure and decreasing immune status of aging population. 4 cases (0.8%) of malignancies was noted in our study, 3 of which were squamous cell carcinoma and a single patient with cutaneous T cell lymphoma. This co relates with the findings noted by Pavithra S *et al* [13] in whose study malignancies accounted for (0.7%) cases and Bilgili *et al* [14] who noted (0.6%) in Turkey. No malignancies were noted in study by Grover S *et al*.[2] The racial and cultural differences and overall standard of living may explain a lower prevalence of skin tumors in our population. The risk of developing melanoma and non-melanoma skin cancers significantly increases with aging. This is related to several factors, including decreased DNA-repair capacity, decreased immune-surveillance and accumulation of carcinogenic material during aging. The duration of exposure to sunlight is longer in elderly people and they develop more damage by ultraviolet light due to decreased melanocytes. Therefore, the incidence of skin cancer is higher in the elderly population.

CONCLUSION

In our study Most common neoplasm noted was seborrheic keratosis and Squamous cell carcinoma was the most common malignancy noted (0.8%). It was more common in frail elderly age group.

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