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EVALUATE THE PREVALENCE OF SKIN TAGS IN A TEACHING HOSPITAL IN PONDICHERRY.

Dermatology

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ABSTRACT

Skin tags are caused by friction between skin folds and or between skin and clothing. Skin tags are commonly seen in axilla, upper chest and beneath the breasts, neck, eye lids and groin folds. Skin tags are acrochordons are benign painless lesions, but manifest with symptoms when there is an abrasion or necrosis. This study was carried out as a cross sectional study in a Teaching hospital. This study was undertaken in the outpatient Department of Dermatology in our Teaching hospital. This study was carried out for a period of seven months between October 2017 and April 2018.The prevalence of acrochordons showed in our study was 14.0% [95% CI: 8.4 to 19.5]. Acrochordons was absent in 129 (86.0%) participants. The prevalence of acrochordons in this study was 14% and majority of them presented as multiple lesions and around the neck. It was observed that history of diabetes mellitus, cardiovascular diseases and hypertension was significant risk factors for acrochordons. Our study demonstrated statistically significant results with uncontrolled diabetes mellitus.

KEYWORDS

Acrochordons, Diabetes Mellitus, Skin tags, Insulin resistance.

INTRODUCTION:

Acrochordons or skin tags, also referred to as soft fibromas is a commonly occurring benign skin lesion which consists of a small portion of the skin projecting from the surrounding skin. (1) Certain variations in the estrogen levels and hormones such as IGF-1, Insulin and Transforming Growth Factor (TGF) and Epidermal Growth Factor (EGF) are also implicated in the incidence of skin tags. (2)

Most of the times the ideology skin tags are unknown but it is said to have a link with paucity of elastic tissue resulting in sessile atrophic lesions. Hormonal imbalances and impaired carbohydrate metabolism are set to be the key pathogenic factors influencing the occurrence of acrochordons. It is very rare to find neoplasms associated with skin tags. (2)

Overall insulin resistance is responsible for influencing the development of skin tags. Insulin is known to promote tissue growth and also stimulates glucose regulation in the tissues at varied intensity. In the presence of insulin resistance, the cells respond less to the effect of the hormone. As a compensation the pancreas starts producing increased quantities of insulin and the hyper-insulinumia promotes release of several growth factors which initiates the development of fibroblastic growth which is activated by receptors and this explains the incidence of skin tags in patients with insulin resistance. (3) While skin tags are a resultant of insulin resistance the contrary is also important. Presence of skin tags may be a predictive response to detect response to insulin resistance and systemic manifestation. There are scarce researches which have been done to evaluate the presence of systemic conditions implicated in skin tags. This study was undertaken as a predictive assessment of prevalence of acrochordons.

Acrochordons are rarely examined for histopathology. The pathological examination reveals the papillary dermis, composed of loosely arranged collagen fibers and dilated capillaries and lymphatic, vessels with no appendageal structures. It is very rare to find a lesion presenting clinically as acrochordon but a component of acrochordons. In such cases it is often malignant melanoma, squamous cell carcinoma or basal cell carcinoma which is often referred to as fibroepithelioma of Pinkus which present as papule in the lower back. (4)

Evaluation of acrochordons involves clinical diagnosis and histopathological conformation followed by surgical management. The clinical diagnosis of acrochordons is done by physical appearance and clinical examination of the skin and surrounding area. The systemic evaluation of the acrochordons could give insight as to the probable cause and pathological risk factors especially with respect to systemic diseases like diabetes mellitus and hypercholesterolemia. In recent times metabolic syndrome is also implicated as a key risk factor for the incidence of acrochordons. Histopathological confirmation may not be absolutely necessary in all patients and is warranted when there is increased suspicion regarding malignancies.

The prevalence of acrochordons has been documented all over the world. It was observed that skin tags were present in 0.9 to 1.2% of all dermatology consultations in 2006 in Brazil. Moreover, the occurrence of skin tags is seen to be increased in the elderly age group beyond 45 years of age and 46% of the cases are above 40 years. (5) Histologically acrochordon is a polypoid with overlying acanthotic epidermis with loose edematous fibrovascular core excepting mild chronic inflammation.(6) A detailed study of acrochordons is warranted in order to understand the etiology, pathogenesis and complications associated with skin tags. Though skin tags may affect individuals for cosmetic reasons, it is proposed to have serious underlying systemic manifestations which need to be explored.

AIM OF THE STUDY: This study was carried out to Estimate the prevalence of skin tags in a Teaching hospital.

MATERIAL AND METHODS:

This study was carried out as a cross sectional study in a Teaching hospital. This study was undertaken in the outpatient Department of Dermatology in our Teaching hospital. This study was carried out for a period of seven months between October 2017 and April 2018. The study population consisted of all the patients who visited the outpatient department during the study period. Obtained from the Institutional Ethics Committee prior to the commencement of the study. Each participant was explained in detail about the study and informed consent was obtained prior to the data collection.The participants were selected using purposive sampling amongst the patients who visited the outpatient clinic of our Dermatology Department.

Inclusion criteria: Adults above 18 years of age. Both Sexes.
Exclusion criteria: Children and Patients presenting with generalized skin disease like psoriasis, Erythroderma, Immunobullous disorder, etc.

Statistical Analysis:

Data was entered and analyzed using SPSS version 15 software. Percentages were used to describe the prevalence of skin tags and systemic diseases. Chi – square was used to document the association between skin tags and systemic diseases. A p value less than 0.05 was considered to be statistically significant.

RESULTS:

This cross-sectional study was carried out among 150 participants visiting the outpatient clinic of our department. The consent form was

given to the patients prior to the interview. A structured interview schedule was used to elicit history regarding the medical conditions. Each participant was clinically examined for skin tags. Random blood sugar was estimated to assess the status of diabetic control.

I. Clinical presentation of acrochordons

The prevalence of acrochordons showed in our study was 14.0% [95% CI: 8.4 to 19.5]. Acrochordons was absent in 129 (86.0%) participants. **(Table 1).**

The clinical presentation of skin tags showed that majority of the skin tags presented as multiple lesions (57.1%) and was present in the neck region (38.1%). Majority of the skin tags (61.9%) presented as small lesions measuring 2 mm in length. All the skin tags were hyperpigmented. **(Table 2)**

DISCUSSION:

This study was carried out as cross-sectional study among the patients visiting the outpatient Dermatology Department of our teaching hospital. The study was carried out among 150 participants. Majority of participants belong to the age group > 40 years (75.3%) and 16.34% were males. Among the participants, majority of them (60.0%) were normal weight. In a study done by Bhargava et al, majority of the participants belonged to the age group of 31 to 40 years and were females which was similar to our study. [24]In a study done by Shrestha P et al majority of the participants were females (54.9%) and they belonged to the age group over 55 years (37.5%) which is similar to our study.(7) In a study done by Tameka A.et al majority of the participants were females (74.5%) and the mean age of the participants was around 50 years which is similar to our study.(8) In another study done by Maluki et al the majority of the participants in the study were females (68.63%) and the mean age of the participants was 38.6 years which is similar to our study.(9)

The prevalence of acrochordons in our study was 14.0%. Multiple skin tags were present in 57.1% of the participants and majority of the skin tags were located in the neck and chest region (38.1%). All the skin tags were hyperpigmented (100%). The size of the skin tags varied from 1 to 4 mm and it was observed that majority of the participants had a size of 2 mm (61.9%). A study done by EL Safouri et al the prevalence of skin tags of 59.3% which was higher than our study. In 21.1% of the participants with skin tags the color of the skin tags was hyperpigmented.(10) In a study done by Zawahry et al the site of presentation of skin tags reveal that the majority of the skin tags were present in the neck region (60%) followed by axilla and chest which is similar to our study results.(11) In a study done by Mustafa et al majority of the lesions were present beyond one site, which is similar to our study. In this study it was observed that majority of the participants had skin tags in the neck region (15%) followed by on the face (15%) majority of the patients (65%) of the skin tags were very small in size, which was similar to our study. Majority of the participants had a hyper pigmented skin tag (63.3%) which was similar to our study. (12)

In our study one of the objectives was to evaluate the association of acrochordons and the risk factors. We also analyzed the evaluated the risk of Body Mass Index as a risk factor for acrochordon. It was observed that participants with overweight and obesity were at increased risk for developing skin tags compared to participant with normal Body Mass Index. However, the observed association was statistically non-significant. It was observed that fasting blood sugar levels > 200mg/dl was a significant risk factor for the development of skin tags the association was not statistically significant (P > 0.005) we also evaluated the association between skin tags and the presences of known history of diabetes mellitus or hypertension or cardiovascular diseases. It was observed that known history of cardiovascular diseases was a risk factor and it increased with prevalence of skin tags (75.0%) compared to patients without with, no history of cardiovascular diseases (12.3%). The observed difference was statistically significant (p< 0.001). Known history of hypertension was significantly associated with the occurrence of skin tags. Participants with known history of hypertension had increased the prevalence of skin tags (29.6%) compared to participants with no history of hypertension (10.6%).

Our study demonstrated the prevalence and association of skin tags with certain systemic conditions. Studies have demonstrated that multiple skin tags are often associated with insulin resistance and obesity. (13) Therefore obesity is a significant risk factor for skin tags. The reason for this difference could be because of the innate characteristic differences in the participants who visited the outpatient department. However, our study demonstrates the significant relationship between history of cardiovascular diseases, hypercholesterolemia, and the presence of skin tags, which has been substantiated by several other studies.

CONCLUSION:

This study was carried out to evaluate the clinical presentation and associated risk factors for acrochordons in a Teaching hospital. The prevalence of acrochordons in this study was 14% and majority of them presented as multiple lesions and around the neck. We also evaluated the medical history, diabetic status and body mass index among the participants. It was observed that history of diabetes mellitus, cardiovascular diseases and hypertension was significant risk factors for acrochordons. Our study demonstrated statistically significant results with uncontrolled diabetes mellitus.

Overall our study has thrown light upon the risk factors and presentation of acrochordons. This study has a large implication in creating awareness regarding the predictive efficacy of skin tags. Any program targeting prevention of non-communicable diseases may be substantially strengthened by providing knowledge regarding the skin tags.

Table -1 Prevalence of Acrochordons among the study participants

S. No	Acrochordon	Frequency (N=150)	Percentage (%)	95% CI
1	Present	21	14.0	8.4-19.5
2	Absent	129	86.0	80.44-91.55

Table 2: Clinical presentation of Acrochordons

S. No	Parameters	Frequency (N=21)	Percentage (%)
1	**Number of skin tags**		
	Multiple	12	57.1
	Single	9	42.9
2	**Location**		
	Axillae (arm)	1	4.8
	Chest	8	38.1
	Elbow	1	4.8
	Eyes	3	14.2
	Neck	8	38.1
3	**Size (mm)**		
	1	0	0.0
	2	13	61.9
	3	6	28.6
	4	2	9.5
4	**Color**		
	Hyperpigmented	21	100

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