Original Research Article

A Clinical Evaluation of Acrochordons in Relation to Obesity, Type 2 Diabetes Mellitus, Age, and Sex

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Received: 09-10-2021 / Revised: 10-11-2021 / Accepted: 16-12-2021

Abstract

Background: Skin tags (STs) have been investigated as a marker of insulin-resistant diabetes (DM), yet the association of Acrochordons to obesity is at this point an issue of discussion. **Aim:** The point of the survey is to examine the relationship between shade, size and number of acrochordons to weight, age, sex and diabetes. **Methods**: This study had included 245 nondiabetic and 276 diabetics patients. Values of body mass index (BMI), sex, age, significant habits, Acrochordons number, size and color in different physical parts. **Results**: The presence and mean values of acrochordons was high in obese people than nonobese people ($P = 0.006$ and $P < 0.001$, exclusively) and was not affected by sex. Regardless, the number extended basically with age. The presence of mixed-color Acrochordons was related to fat ($P < 0.001$) individuals. Multivariate key backslides revealed that primary BMI was basically associated with the mixed-color Acrochordons (OR = 3.5, $P < 0.001$). The relationship of DM (OR = 1.7) with mixed-color Acrochordons was nonsignificant ($P = 0.073$). Neither age nor sex had any relationship with mixed-color Acrochordons. Inside cases that made mixed-color Acrochordons, the multivariate assessment showed that fundamental BMI had a tremendous association with the amount of Acrochordons (beta = 0.256, $P = 0.034$). **End:** The audit showed that the number just as the presence of mixed-color ST was related to weight, but not to diabetes. The presence of mixed-color Acrochordons in nondiabetic subjects needs close evaluation of BMI.

Keywords: Age, diabetes mellitus, obesity, sex, skin tags

Introduction

Obesity and Impaired Glucose Tolerance (IGT) are high-risk factors for origination of Diabetes Mellitus (DM). IGT is depicted by the responses of plasma glucose towards oral glucose challenge which is still not at the level of DM. Patients diagnosed with IGT show inconsistencies in insulin movement and release of early insulin, at par with those which are found in patients who are diagnosed withinsulin-resistant diabetes.[1] Obesity and a high-fat eating routine may add to the advancement of both impaired insulin secretion and insulin resistance in powerless patients.[1] There does not currently exist any reasonable limits to recognize those patients who are diagnosed with obesity or IGT ahead to DM.

Acrochordons, fibrous dysplasia, pedunculated lipofibromas, or skin tags are largely terms to portray a run of the mill innocuous dermatosis, that contains a touch of skin which protrudes from enveloping skin.[2] Histologically, acrochordons is a polypoid sore with overlying to some degree epidermal acanthosis, a free, edematous fibrovascular focus showing delicate constant aggravation and nerveless dermis.[3] They consistently create spaces of skin friction.[4] Acrochordons have been represented to be connected with various disorders as well as insulin-resistant diabetes [5-7] and obesity.[8,9] Acrochordons have been explored as an epidermic marker for insulin-resistant diabetes and strength by assessing body mass index, glucose curve [5,10] and insulin level.[11,12]

Although the contact of acrochordons with insulin obstruction and insulin-resistant diabetes was set up in past studies,[11] further assessments are advocated in the space of corpulence and Acrochordons.[13] Thus, to examine this region, the relation of the shade, size, and number of Acrochordons to diabetes, age, sex and obesity will be discussed throughout this study.

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Material and Methods

This study had been organized in a medical college hospital. A total of 521 members had been included in this study. A total of 245 members were in the non-diabetic group, among whom 123 were males and 122 were females. A total of 276 members were in the diabetic group, among whom 122 were males and 154 were females. History taking included age, sex, conjugal status, family background of diabetes, and history of heart, endocrinal or gastrointestinal issues, hepatic. Patients with a connected ailment had been excluded from the study. Fasting blood glucose for the nondiabetic group was assessed to bar occult diabetes. BMI was determined for all cases as per the accompanying equation:[14] BMI= [weight (kg)]/[height(m)] 2. The universally acknowledged reach for BMI is as per the following: underweight <18.5, typical 18.5–24.9, overweight 25.0–29.9, weight 30.0–39.9 and outrageous heftiness >40.

The profiles of acrochordons were analyzed and assessed in every one of the members. The accompanying grouping boundaries were utilized (changed from Kahana et. al).[5]

Number: Few (1–4), moderate (5–10) and many (>10).
Size: Very early (noticeable not felt), little (projection of <0.5 cm), medium (0.5–1 cm) and enormous (>1 cm).
Site: Eyelids (right-left), neck (right-left), axilla (right-left), trunk (right-left).
Shading: Flesh tone, hyperpigmented or of a blended shading. Mixed-color acrochordons implies the presence of the two tones, i.e., hyperpigmented and flesh acrochordons in a similar physical region as in the neck, or in the axillae.
These boundaries of acrochordons were thought about in obesity and the diabetics versus the nonobese or the nondiabetics. Data have truly portrayed the extent that span, mean ± standard deviation (±SD), relative frequencies and frequencies. Assessment of quantitative elements between the review groups was conducted with the help of the student's t-test for free samples. For contrasting outright data, Chi-square ($\chi 2$) test was conducted. A cautious test was conducted rather when the ordinary repeat was under 5. Association between various elements was done with the help of Pearson second relationship condition. A p-value under 0.05 regarded as measurably significant. All genuine assessments were carried out with PC programs Microsoft Excel and SPSS variant 15.

Fig 1: Evaluation of Acrochordons

Results
For exploring the conversation recorded as a hard copy concerning the connection of acrochordons to obesity, the connection of the profiles of acrochordons to corpulence, age, sex and diabetes was analyzed. The central characteristics thought about are presented.

Relation of acrochordons to sex and age
The mean value of acrochordons in the concentrated group was 5.36 ± 11.92, while the mean age of the concentrated group was 45.30 ± 12.54. In this review, the amount of acrochordons is related basically with age (P = 0.002). No basic contra-acrochordons in transcendence and mean number of Acrochordons among males and female groups was found (P = 0.56 and P = 0.36, independently). No tremendous qualification in the ordinariness of ST's tones (tissue, dim and mixed) among males and female groups was found either (P = 0.31).

Relation of acrochordons to obesity
Predominance of acrochordons was perceived even more consistently among fat members 199/310 (64.2%) appeared differently concerning nonobese patients 110/211 (52.1%). The results were truly immense (P = 0.006). Mean values of acrochordons was found to be essentially high among obese patients (7.11 ± 14.999) in correlation with those who weren't obese (2.92 ± 4.96, P < 0.001). The inescapability of mixed-color acrochordons was essentially more among bold patients [81 (42.2%)] diverged from those who weren't obese [18 (17.6%], P < 0.001). Of course, the transcendence of flesh-color [58 (56.9%)] and hyperpigmented [26 (25.5%)] Acrochordons was higher among the nonobese patients in correlation with the obese [75 (39.1%)], and 36 (18.8%), respectively], (P < 0.001).

Fig 2: Acrochordons

Relation of acrochordons to diabetes mellitus
The ordinariness of acrochordons was all the more regularly much of the time among the diabetic patients 167⁄276 (60.5%) in examination with nondiabetic patients 142⁄245 (58.0%). Regardless, the results were not truly basic (P = 0.56). Mean values of acrochordons was high among diabetics (6.28 ± 13.75), as in correlation with nondiabetics (4.45 ± 10.016). The results were additionally not genuinely critical (P = 0.09). Among diabetics, the prevalence of mixed-color acrochordons was high [70 (43.2%)] in contrast with the nondiabetics [29 (22.0%)] (P < 0.001). Simultaneously, the transcendence of flesh-colored [68 (51.5%)] and skin-pigmented [35 (26.5%)] acrochordons was higher in the nondiabetics [65 (40.1%)], (P < 0.001). The multivariate strategic relapse for the components related with the occasion of mixed-color Acrochordons, however, the multivariate relapse examination for the parts affects the amount of mixed-color Acrochordons.

Relation of acrochordons' size to DM, obesity and sex
The relationship of mean values of acrochordons of different sizes among the male and the female patients was insignificant. Mean of medium size acrochordons was high among diabetics than nondiabetics(P=0.003).Contrariwise, mean of little size acrochordons was out and out high among obese patients than the non-obese (P < 0.001).

Relation of acrochordons in various physical destinations to DM, obesity and sex
The relationship of mean values of acrochordons in different physical destinations was nonsignificant among diabetics-nondiabetics, and males-females. However, it was measurably huge among obese as compared to nonobese patients in the right axilla (P = 0.010), in the

trunk (P = 0.040), left 50% of the neck (P = 0.001), and in right 50% of the neck (P < 0.001).

Discussion

This is the principal report which entails the explicit qualities of acrochordons' tone among obese individuals where mixed-color acrochordons prevail.

Relation of skin labels to age

This study found that the mean of acrochordons expanded with age and when it arrives at a peak value, it declines, but not for the obese group in which it kept on ascending with age. The decrease of acrochordons' number was accounted for likewise by Thappa [7] in a study of 35 subjects diagnosed with acrochordons. Thappa had revealed that the danger of getting acrochordons heightened with age but the danger of creating acrochordons diminished after the age of 50. In another study conducted by Banik and Lubach [15], the findings stated that the 50 age is by all accounts a defining moment when an increase is noticed.

Relation of acrochordons to diabetes and obesity

There exists two fundamental boundaries for anticipating insulin-resistant diabetes, obesity and IGT. The findings from the study conducted by Motala et al.[16] addresses an identical representation of these boundaries. A 10-year investigation of tolerance tests for oral glucose was conducted among South-African Indians, who are often known for high rates in insulin-resistant diabetes. The review showed that just 91/563 (16.2%) had diabetes. Among the nondiabetic patients, only 49 patients (9.5%) had advanced into DM. The authors Motala et al., found that BMI, obesity and high baseline blood glucose are crucial predictors of insulin-resistant diabetes.

An increase of acrochordons' numbers when identified with obesity in comparison to when identified with DM was found. The consequences of these findings was that researchers Puneet and Deepak[8] revealed a relationship between acrochordons, IGT and corpulence; it is additionally as per the after-effects of Garcia-Hidalgo et al.[9] who concentrated on 156 large patients. Another finding was that the level of acrochordon patients had expanded with the seriousness of weight. The outcomes had substantiated the findings from Ramazan Sari et al.'s study [11] who had tracked down that 38 out of 113 patients with acrochordons were obese. Then again, our review goes against the perception of Rasi et al.[10] They detailed that patients who had more than 30 acrochordons were especially at an expanded danger of DM. In our review, the event of acrochordons in diabetic gathering was not fundamentally high as compared to nondiabetic patients (P = 0.56). Likewise, mean values of acrochordons among the patients with diabetes was not genuinely high as compared to nondiabetics (P = 0.09). Then again, the event of Acrochordons in large members was altogether high in comparison with nonobese members (if diabetic) (P = 0.006). Likewise, mean values of acrochordons in obese was essentially high, more than the nonobese patients (P < 0.001). This goes against the consequences of the study by Kahana et al.[5] who found that acrochordons were not related with the expanded occurrence of obesity contrasted with everyone and goes against the aftereffects of Rasi et al.[10] and Ramazan Sari et al.[11] No relationship was found between values of Acrochordons and BMI.

Presently, do these outcomes uphold any information whatsoever molecular level? Indeed, the findings support the consequences of Manal and Olfat.[17] They revealed that tissue articulation of insulin-like development factor (IGF-I) in Acrochordons of fat subjects was 2093.3 ng⁄g. However, among acrochordons of diabetic patients it was 829.3 ng⁄g. By and large, hyperinsulinemia may initiate both epidermal and fibroblast proliferation, the fundamental parts of Acrochordons, employing the enactment of IGF-I receptors.[18]

Conclusion

Even though the connection of Acrochordons to insulin obstruction andinsulin-resistant diabetes was set up in past investigations, further examinations are justified in obesity and acrochordons. The after-effects of this study showed that the number, as well as presence of mixed-color ST, was identified with obesity, yet not diabetes. Presence of mixed-color acrochordons in nondiabetic patients require close investigation of BMI.

Conflict of Interest: Nil Source of support:Nil

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