Eccrine Hidrocystoma. Clinical Descriptive Study

Thamir A Kubaise, MB Ch B, FIBMS
Department of Dermatology & Venerology, Collage of Medicine, University of Anbar.

Abstract :

Background: Eccrine hidrocystoma is a benign cystic sweat gland tumor, occurs on the face, and is more common in women. It characterized by chronic course and seasonal variability mostly presents during hot humid weather.

Objective: To assess the different clinical presentation of eccrine hidrocystoma. Because it frequently faced by many dermatologists and ophthalmologists.

Patients& Method: A clinical descriptive study was conducted in the Department of Dermatology and Venerology, Ramadi General Hospital, Anbar, Iraq from May 2007 to March 2008. Forty two patients with eccrine hidrocystoma were enrolled in this study. Detailed history and clinical examination were performed for all patients. Fasting blood sugar test was done for all patients. Thyroid function test was done for some patients. Histopathological study was done for two patients.

Results: The age of patients ranged between 35 -70 (45.71±9.59)years, 40 females and 2 males with female to male ratio 1:0.05. Disease duration ranged between 2-156 (37.61±32.77)months. All patients presented from May till mid October. With exacerbation at summer season in 32 patients (76%). Forty patients (95%) were housewives with positive family history in 5patients (`12%). Eight patients (19%) have solitary lesions, while 34 patients (81%) have multiple lesions. Association with diabetes mellitus seen in 10 patients (24%).

Eccrine hidrocystomas have bilateral symmetrical Centro facial distribution of cheeks with lower eye lids involvement. All patients showed a symptomatic small vesicular, skin colored lesions, with black discoloration at the tip of the vesicles, and when doing puncture by a sterile needle, a clear fluid content will be seen.

Conclusions: Eccrine hidrocystoma is common benign cystic tumor of sweat glands, characterized by multiple vesicles which involve both checks, associated with profuse sweating affecting adult housewives women with chronic course with exacerbation in summer months mostly at August. Diabetes mellitus may have a role in the pathogenesis of the disease.

Keyword: Eccrine hidrocystoma, Benign cystic tumor

Introduction

Eccrine hidrocystoma is benign cystic sweat gland tumor.[1] They are usually solitary, occur on the face, and are more common in women. In some patients multiple lesions may be present and they may be pigmented.[2]

This facial dermatosis is characterized by asymptomatic, skin colored papulonodular or cystic lesions, usually with bluish tent ranging from 2-5mm in diameter and mainly has centrofacial distribution.[3]

In the majority of patients, the tumor appears as single cystic lesions with mediam size about 1mm in diameter located close to but does not involve the eyelid margin, and can cause significant functional and cosmetic morbidity (ptosis, epiphora) despite their

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benign nature.[4,5] Eccrine hidrocystoma is characterized by chronic course and seasonal variability mostly present during hot humid weather, and the disease prevalent in adults between 30-70 years of age.[3]

Under the microscope, the lesion appears as unilocular cyst which usually contains a single cystic cavity composed of 1-2 layers of cuboidal cells, and located within middermal or superficial layer of the skin.[3]\Diseases may be related to the development of eccrine hidrocystoma which are Graves' disease[6], Parkinson disease[7] and Goltz-Gorlin syndrome.[8]

Careful clinical and histopathological examinations are important to differentiate the eccrine hidrocystoms from apocrine hidrocystoms, epidermal cyst, mucoid cyst, hemangioma, lymphangioma, cystic basal cell carcinoma, malignant melanoma.[9]

The treatment for solitary lesion is either by simple needle puncture[9], surgical excision or by surgical incision with cauterization of the cyst wall.[10]

While multiple lesions can be treated with topical 1% atropin ointment, scopolamine 0.01% (10 from 9) or pulse dye laser with 585 nm laser. [11]

One case of multiple eccrine hidrocystoms is treated with botulinum toxin with very good result.[12]

The aim of this study is to asses the different clinical presentation of this benign tumor.

Patients and Method

A clinical descriptive study was conducted in the Department of Dermatology and Venerology, Ramadi General Hospital, Anbar, Iraq from May 2007 to March 2008. Forty two patients with eccrine hidrocystoma were enrolled in this study. They were clinically evaluated and described thoroughly.

A detailed history was taken regarding the age of patient, gender, job, the onset and duration of complaint, history of hyperhidrosis, seasonal variation, aggravating factors like sun exposure and heat. Also family history of same dermatosis and personal or family history of diabetes mellitus was taken.

Detailed clinical examination were done regarding site of involvement of face whether in the center or peripheral, color, cyst content, number of the lesions is either solitary (when less than 3 lesions) or multiple (when 3 lesions and more).

Photographs and fasting blood sugar test were done for all patients; histopathological study was done for two patients (one with solitary eccrine hidrocystoma and the others with multiple type); while thyroid function test was done for patients with a history of profuse generalized sweating, palpitation and another signs of thyrotoxicosis.

Result

Forty two patients were enrolled in this study, 40 females (95%) and 2 males (5%) with female to male ratio 1:0.05. Their age ranged between 35 -70 years with mean ± SD of 48.76±9.78 years.

The age of onset ranged between 34.5-65 years with mean ± SD of 45.71±9.59 years. Disease duration ranged between (2-156 months) with mean ± SD of 37.61±32.77 months.

All patients presented at hot season from May till mid October, and 24 patients (57%) presented at August,

Recurrence was seen in 32 of patients (76%) at summer season with exacerbation and proliferation of lesions by exposure to heat and sun. With history of complete spontaneous regression during winter months.

Forty patients (95%) were housewives, with prolong daily exposure to heat during cooking and baking. Family

history of eccrine hidrocystoma was seen in 5 patients (`12%).

Ten patients (24%) have personal history of diabetes mellitus and 8 patients (19%) have family history. All patients complain of distressing facial sweating and 8 patients (19%) have profuse generalized hyperhidrosis.

Eight patients (19%) have solitary type with lesion's size more than 5mm in diameter (Figure-1). While 34 patients (81%) have multiple type of disease and the number of lesions ranged between 10 to 50 with lesion's size less then 5 mm in diameter (Figure-2). The table-1 shows the location of lesions in patients with eccrine hidrocystoma.

All patients show small vesicular, skin colored lesions, with black discoloration at the tip of the vesicles, and when doing puncture by a sterile needle, a clear fluid content will be seen.

The fasting blood sugar test were elevated in 10 patients (24%), who had history of diabetes mellitus. Other patients had controlled serum blood sugar at time of visit.

Thyroid function test was done for 8 patients (19%) and showed a normal limit values. The histopathological study was done for 2 patients (5%), one with solitary eccrine hidrocystoma and another with multiple type and both cases showed intradermal cyst with double layers of cuboidal cells.

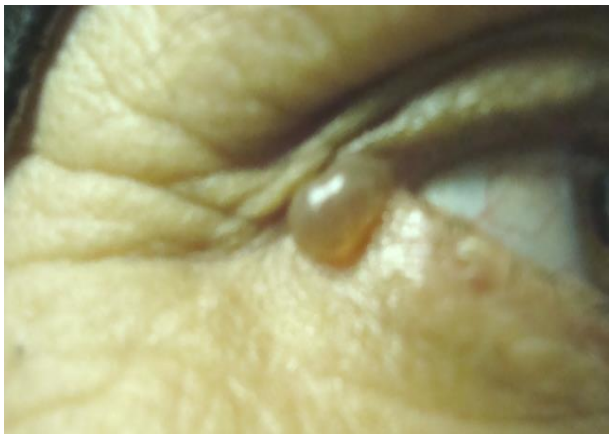

Figure-1 Shows a patient with solitary type

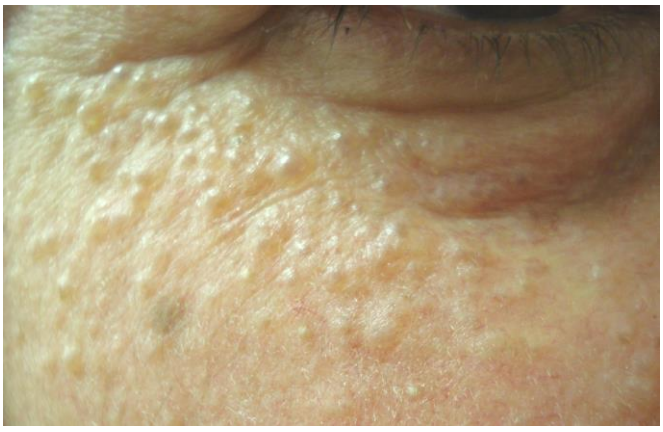

Figure-2 Shows a patient with multiple type

Table-1 shows the location of lesions in patients with eccrine hidrocystoma N=42

Site of lesions	**No. of patients**	**(%)**
Both cheeks with Centro facial distribution	**30**	**(71)**
Both lower eye lids on medial or lateral parts	**8**	**(19)**
Both cheeks and evelids	**4**	**(10)**

Discussions:

Eccrine hidrocystoma is benign cystic sweat gland tumor.[1] They are usually solitary, occur on the face, and are more common in women, frequently misdiagnosed as acquired melanocytic nevus or epidermal cyst, mucoid cyst, hemangioma, lymphangioma, cystic basal cell carcinoma, malignant melanoma.[9]

The present study shows that 81% of cases have multiple eccrine hidrocystoma more frequent than solitary type that affect (19%) of cases, and are not a rare dermatosis. These are opposite to previous reports.[1, 2, 3]

All lesion types are characterize by skin colored vesicles with black discoloration at the tip, mainly involve the checks in (71%) of cases, lower eyelids in (19%) of cases and both areas in (10%) of cases. These features are similar to previous studies.[3] And when puncturing the vesicle with a sterile needle, it produces a clear fluid content. This will helps in the diagnosis and differentiate from other similar conditions.

This report shows that 76% of cases characterized by development and proliferation of lesions during summer months from May to mid October, with more than half of cases present in August may be due to high humidity and hottest weather, then followed by spontaneous regression during winter months. This seasonal variability of exacerbation and remission were reported in previous studies. [2,3]

The present study shows that 95% of cases were adult women between 35-70 year old. This was similar to other studies.[2,3] all women were housewives. This may be related to prolong daily heat exposure and profuse sweating that may initiates the pathogenesis of the disease. So their may be a relation between housewives dermatosis and eccrine hidrocystoma.

This report shows that 12% of cases have family history of eccrine hidrocystoma , so a weak inheritance role can affect the pathogenesis, besides heat and sun exposure.

Diabetes mellitus presents in (24%) of cases with elevated serum blood sugar. While family history of diabetes mellitus seen in (19%) of cases. This was not mentioned in the previous studies.[1, 2, 3]

The histopathological study done for (5%) of cases shows intradermal cyst with double layers of cuboidal cells. This is similar to previous report.[3]

Thyroid function test was done for (19%) of cases with a clinical suspicion of thyrotoxicosis and shows a normal limit values. Unlike previous studies that report an association of eccrine hidrocystoma with thyroid dysfunction.[6]

In conclusions, Eccrine hidrocystoma is a common benign cystic tumor of sweat glands, characterized by multiple or solitary vesicles involve both checks, associated with profuse sweating, affecting adult housewives women with chronic course of exacerbation at summer months, mostly at August. Diabetes mellitus may have a role in the pathogenesis of the disease.

References

1- De Viragh PA, Szeimies RM, Eckert F. Apocrine cystadenoma, apocrine hidrocystoma, and eccrine hidrocystoma: three distinct tumors defined by expression of keratins and human milk fat globulin 1. ***J Cutan Pathol*** 1998 Mar; 25(3):182-4.

2- Odom R, James W, Timeltly B. Epidermal Nevi, Neoplasms and Cysts in: Andrews Diseases of the Skin, Clinical Dermatology 9th edition WB Saunder Company, Philadelephia, 2000, pp 800-868.

3- Alfadley A, Al Aboud K, Tulba A, Mouras MM. Multiple eccrine hidrocystomas of the face***. Int J Dermatol*** 2001 Feb; 40(2):125-9.
4- Singh AD, McCloskey L, Parsons MA, Slater DN. Eccrine hidrocystoma of the eyelid. ***Eye*** 2005 Jan; 19(1):77-9.
5- Sheth HG, Raina J. Giant eccrine hidrocystoma presenting with unilateral ptosis and epiphora. ***Int Ophthalmol*** 2007 Oct 6.
6- Nagai Y, Ishikawa O, Miyachi Y. Multiple eccrine hidrocystomas associated with Graves' disease. ***J Dermatol*** 1996 Sep; 23(9):652-4.
7- Schröder K, Goerdt S. Multiple eccrine hidrocystomas in Parkinson disease. ***Hautartzt*** 1997 Apr; 48(4):270-3.
8- Ascherman JA, Knowles SL, Troutman KC. Extensive facial clefting in a patient with Goltz syndrome: multidisciplinary treatment of a previously unreported association. ***Cleft Palate Craniofac J*** 2002 ; 39:469–473.
9- Khashayar Sarabi, Amor Khachemoune. Hidrocystomas A Brief Review. ***MedGenMed*** 2006; 8(3): 57.
10- Armstrong DK, Walsh MY. Corbett JR. Multiple facial eccrine hidrocystomas: effective topical therapy with atropine. ***Br J Dermatol*** 1998 Sep; 139:558–559.
11- Tanzi E, Alster T. Pulsed dye laser treatment of multiple eccrine hidrocystomas: a novel approach. ***Dermatol Surg*** 2001; 27:898–900.
12- Blugerman G, Schavelzon D, D'Angelo S. Multiple eccrine hidrocystomas: a new therapeutic option with botulinum toxin. ***Dermatol Surg*** 2003 May; 29(5):5557-9.