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Authors

Saenz-Aguirre, Amaia
Goula-Fernández, Sofía
Martínez de Lagrán-Álvarez de Arcaya, Zuriñe
et al.

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An atypical presentation of discrete papular mucinosis in the genitalia mimicking a molluscum contagiosum infection

Amaia Saenz-Aguirre¹, Sofía Goula-Fernández¹, Zuriñe Martínez de Lagrán-Álvarez de Arcaya¹, Blanca Catón-Santaren²

Affiliations: ¹Dermatology Department. Araba University Hospital. Vitoria-Gasteiz. Spain, ²Pathology Department. Araba University Hospital. Vitoria-Gasteiz. Spain

Corresponding Author: Amaia Saenz Aguirre MD, Dermatology Department, Calle José Atxotegi s/n, 01009 Vitoria-Gasteiz, Spain, Tel: 34-600326560, Email: amaiasaenzaguirre@gmail.com

Abstract

Discrete papular mucinosis is a rare variant of primary cutaneous mucinosis. Involvement of genitalia is extremely rare and can mimic molluscum contagiosum. We report the second case of a papular mucinosis with an exclusive genital involvement.

Keywords: discrete papular mucinosis, genitalia, molluscum contagiosum

Introduction

Cutaneous mucinosis (CM) represents a group of dermatoses showing an anomalous dermal deposit of mucin. Papular mucinosis (PM) is a variant of primary CM, presenting as small papules that can arise in different body sites. We present the second case of a PM with an exclusive genital location.

Case Synopsis

An otherwise healthy 42-year-old man complained about a papular eruption on the penis for the past four months. This eruption developed following a high-risk sexual contact. He presented with small grouped skin-colored papules on the penis, clinically suggestive of a molluscum contagiosum (MC) infection, although they were not typically umbilicated (**Figure 1**). The curettage and subsequent histological analysis showed dermal mucinous deposits (**Figure 2**) and a diagnosis of

discrete papular mucinosis (DPM) was reached. Evaluation for autoimmunity was unrevealing. Serum protein electrophoresis and serologies for sexually transmitted infections (STI) were performed and showed a positive serology for hepatitis C virus (HCV), which had already been known and successfully treated more than 10 years before. The patient did not respond to topical treatment with clobetasol 0.05% and tacrolimus 0.1% ointments or electrocauterization. He is continuing to be followed up on our clinic,

Case Discussion

Discrete papular mucinosis is a variant of PM characterized by the presence of 2-5mm skin-



Figure 1. Small grouped skin-colored papules on the penis, non-umbilicated.

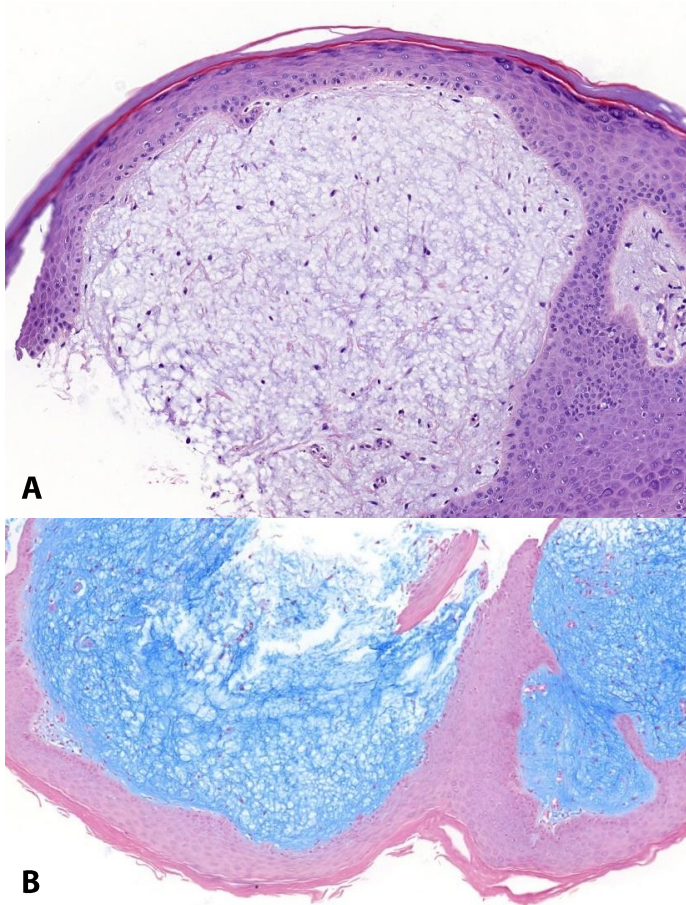


Figure 2. Dermal mucinous deposits are observed, **A)** H&E, 15.6×, **B)** Alcian blue 10.9×).

colored, reddish or violaceous papules on the trunk or limbs and typically distributed in a symmetrical pattern [1]. The papules tend to appear in proximal sites and rarely resolve spontaneously [1].

Discrete papular mucinosis affecting the genitalia is extremely infrequent. We have only found one case in the literature reporting a self-healing variant of PM with an exclusive genital involvement, which was also mistaken for MC infection [2]. The lack of more publications reporting an exclusive genital

involvement in the context of a PM suggests that it can be misdiagnosed. Moreover, DPM lesions can clinically resemble those of a MC infection, which are much more frequent in this location. However, typical MC lesions show a central umbilication, which was not evident in this case. Hence, a histological analysis can be helpful to reach the correct diagnosis in such doubtful or clinically atypical MC lesions.

The histological analysis of DPM shows mucinous dermal deposits that are stained with colloidal iron or alcian blue. A work-up to rule out associated diseases is recommended once the diagnosis is made. In our patient, a previously known and successfully treated HCV infection was detected. HCV infection and its treatment have also been related to PM in several articles [3-9]. However, in our patient, as the development of DPM happened more than 10 years after the successful treatment of HCV infection, we do not believe that HCV is relevant in the etiopathogenesis of DPM in our case.

Characteristics of our case are compared to those previously described with exclusive genital involvement or association with HCV and treatment is summarized in **Table 1**.

Conclusion

We find this case interesting owing to the scarcity of publications about DPM exclusively affecting the genitalia. It is important to bear DPM in mind in the differential diagnosis of papular lesions affecting the genitalia.

Potential conflicts of interest

The authors declare no conflicts of interests

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Table 1. Comparison between our case and previously published cases with exclusive genital involvement and with the cases related to hepatitis C virus.

	Age	Race	Gender	Comorbidities	Skin lesions	Time of evolution	Localization	Special stains	Laboratory evaluations	Treatments for cutaneous lesions	Evolution
Rongioletti et al (1998)	59	Non-specified	Female	HCV treated with recombinant IFN α 2a	Multiple 2 to 4 mm flesh-colored papules	18 years	Arms and forearms	Alcian blue	Elevated liver function tests and HCV	None	Worsened with antiviral treatment and maintained after stopping
Montesu (2001)	70	Non-specified	Male	HCV	Whitish colored papules mostly linear	2 years	Clavicle, neck, face and scalp, and hands	Alcian blue	Elevated liver function tests and HCV	Topical steroids and emollient creams	Moderate improvement
Banno (2001)	55	Non-specified	Female	Chronic hepatitis	Multiple grouped flesh-colored papules	4 months	Nape, upper back, and chest, and painful swollen lesions on both of her hands (Fig. 1).	Alcian blue	Elevated IgG, IgM, liver function tests and HCV	Systemic corticosteroid (betamethasone 1.5mg/day)(8 months)	Resolution
Siewert et al (2005)	59	Caucasian	Male	HCV treated with IFN α 2a	Erythematous plaques with ulceration necrosis	10 weeks after starting treatment with IFN α 2a	At the injection sites in the abdomen	Alcian blue	Elevated transaminases and HCV	None	Self-healed in 3-6 months after finishing antiviral treatment
Feliciani et al (2009)	34	Non-specified	Male	None	Skin colored papules	1 month	Penis and genitalia	Alcian blue and periodic-acid-Schiff stains	Normal	None	Disappeared in one week
González-Fernández et al (2014)	50	Non-specified	Male	HCV following treatment with IFN α 2a and ribavirin	6 months	Multiple non-coalescing, skin-colored papules	Left scapular area, shoulders, upper back and extremities.	Mucicarmine and colloidal iron	HCV	None	Resolution after stopping antiviral treatment
Smith et al (2015)	57	Non-specified	Female	HCV treated with ribavirin	5 months	Indurated erythematous subcutaneous	Scalp, face, neck, upper trunk, dorsal	Colloidal iron	Elevated liver function tests, HCV	Hydroxychloroquine,	Disappeared after antiviral treatment

				and pegylated IFN α 2a		papules and plaques	hands and palms			topical steroids,	
Jones et al (2018)	60	Non-specified	Male	HCV treated with sofosbuvir-velpatasvir for 12 weeks	Waxy papules and plaques and leonine facies	18 months	Face, scalp, neck, distal part of extremities	Colloidal iron, stains for infectious organisms and amyloid	HCV	None	Disappeared after antiviral treatment
Saenz et al (2020)	42	Caucasian	Male	HCV successfully treated more than 10 years before	Grouped skin-colored papules	4 months	Penis	Alcian blue and colloidal blue	HCV	Clobetasol 0,05% and tacrolimus 0,1% ointments and electrocauterization	No response or relapse