(D) Public Health

Seeing Through the Skin: Imaging and Differential Diagnosis of Genital Lesions in STIs at a Dermatologic Center in Quito

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Background

Genital dermatologic conditions, including sexually transmitted infections (STIs), often overlap with inflammatory, autoimmune, infectious, and tumoral dermatoses [1]. This presents a challenge in resource-limited settings such as Quito, Ecuador, where access to specialized care is limited. In Spain, where dermatology and venereology are integrated, STIs and anogenital dermatoses account for only 3.16% of consultations, with common conditions including HPV lesions, molluscum contagiosum, and inflammatory diseases [2]. In contrast, in Ecuador, venereal diseases are typically managed outside dermatology, leading patients to navigate multiple specialties. This fragmented system contributes to underreporting and an underestimation of STI prevalence. To address this gap, we developed a comprehensive set of diagnostic tools, including a data compilation on prevalent STIs and their mimickers in Quito, as well as a clinical image gallery, to improve diagnostic accuracy for general practitioners and dermatologists.

Methods

We conducted a retrospective descriptive study at Centro de la Piel (CEPI) in Quito, reviewing clinical images and diagnostic data from patients with genital lesions documented between January 2021 and December 2024. A board-certified dermatologist classified lesions as STI-related or non-STI based on clinical and imaging findings. Descriptive statistics determined the proportions and identified commonly misdiagnosed conditions, while a photo gallery with clinical descriptions highlighted overlapping and distinguishing features.

Results

A total of 99 genital lesion cases were analyzed from January 2021 to December 2024, representing 0.22% of all diagnoses during this period. Of these, 44 cases (44.4%) were STI-related, while 55 (55.6%) were non-STI anogenital dermatoses. The most frequently diagnosed STI-related conditions were condyloma acuminata (29.5%), herpes simplex (27.3%), flat warts (13.6%), candidiasis (11.4%), and molluscum contagiosum (11.4%). Syphilitic lesions (condyloma lata and chancres) and lymphogranuloma venereum were each observed in one case (2.3%). While molluscum contagiosum is often classified as an STI, it is not always sexually transmitted, complicating its classification.

Among the 55 non-STI dermatoses, cases were categorized as tumoral (20%), inflammatory (29.1%), autoimmune (34.5%), and non-STI infectious (16.4%). The most prevalent condition was lichen sclerosus (16.4%), followed by lichen planus (9.1%), tinea (9.1%), and fixed drug eruption (7.3%). Notable cases included verruga peruana, squamous cell carcinoma, Bowen's disease, pemphigus, and Grover's disease.

Regarding the clinical description for overlapped lesions, both lichen sclerosus and HPV lesions show atrophy, however, lichen sclerosus presents as porcelain, sclerotic plaques with scarring, while HPV lesions are more verrucous [3]. Similarly, lichen planus features violaceous, flat-topped papules with Wickham striae, contrasting with the clustered vesicles on an erythematous base typical of HSV [3].

Conclusion

Our research highlights the need for improved diagnosis in places with limited resources like Quito, where STIs and anogenital dermatoses frequently coexist. By developing comprehensive data on anogenital dermatoses, and a clinical image gallery with descriptions, we aim to aid in improving diagnostic accuracy, optimize the referral process within the healthcare system, and enhance primary care management. Additionally, improved cooperation between general practitioners and dermatologists is necessary to prevent misdiagnosis and guarantee prompt treatment.

References

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Data

Table 1. Anatomic localization of the STIs and anogenital dermatoses

Penis	62
Anus	16
Vulva	21

Total: 99

Table 2. STIs and anogenital dermatoses

STIs			Anogenital dermatoses	
STI		Number of cases	Anogenital dermatoses	Number of cases
HPV	Condyloma accuminata	13	Lichen sclerosus	9
	Flat warts	6	Liquen planus	5
HSV	Herpes simplex	12	Tinea	5
Syphilis	Condyloma lata	1	Fixed drug eruption	4
	Chancre	1	Granuloma	3
Chlamydia	Lymphogranuloma venereum	1	Intertrigo	3
Candida	Candida	5	Scabies	3
Poxvirus	Molluscum contagiosum*	5	Squamous cell carcinoma	3
			Irritant dermatitis	3
			Calcinosis cutis	2
			Fibroma	2
			Lichen simplex chronicus	2
			Psoriasis	2
			Verrucous epidermal nevus	2
			Atrophoderma	1
			Bowen disease	1
			Cyst	1
			Grover disease	1
			Pemphigus	1
			Peruvian warts	1
			Vitiligo	1
Total		44	Total	55

				16.4
				9.1

Total: 99