

Table 1 Description of patient exanthema findings

Characteristic	Patients with morbilliform eruptions (n = 37)	Patients with urticarial eruptions (n = 2)
Demographics		
Age in years (mean ± SD)	58.8 ± 15.1	71.3 ± 12.1
Gender		
Male	25 (67.6%)	1 (50.0%)
Female	12 (32.4%)	1 (50.0%)
Hospitalization:		
Length of stay in days (mean ± SD)	34.2 ± 18.8	28.5 ± 16.3
Intensive care unit admission	34 (91.9%)	1 (50.0%)
Death	3 (8.1%)	–
Culprit drugs		
Day of rash onset since admission (mean ± SD)	12.0 ± 9.5	0.0 ± 7.1
Day of rash onset since COVID symptom onset (mean ± SD)	24.7 ± 12.6	7.5 ± 10.7
Rash onset within 14 days of COVID-19 symptom onset	6 (16.2%)	1 (50.0%)
Having any possible culprit drugs identified	36 (97.3%)	1 (50.0%)
Having any likely† culprit drugs identified	28 (75.7%)	1 (50.0%)
Having likely culprit drug exposure from 0 to 7 days of rash onset	17	1
Having likely culprit drug exposure from 8 to 14 days of rash onset	9	–
Having likely culprit drug exposure from 15 to 28 days of rash onset	1	–
Day of rash onset since exposure to likely drug culprits (mean ± SD)	7.8 ± 5.9	0.0 ± 0.0
Most common likely culprit drugs identified		
Cefepime	16	–
Ceftriaxone	8	1
Meropenem	3	–
Vancomycin	4	–
Azithromycin	1	–

Abbreviations: SD, standard deviation.

†Likely culprit drugs were distinguished by reviewers based on epidemiologic incidence of induction of cutaneous adverse reactions.

6 Bigby M. Drug-induced cutaneous reactions. *JAMA* 1986; **256**: 3358.

7 Schneck J *et al.* Effects of treatments on the mortality of Stevens-Johnson syndrome and toxic epidermal necrolysis: a retrospective study on patients included in the prospective EuroSCAR Study. *J Am Acad Dermatol* 2008; **58**: 33–40.

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Evolution of notified sexually transmitted infections in Barcelona during the first wave of the COVID-19 pandemic

Dear Editor,

With the arrival of COVID-19, STI units decreased their activity or even closed and individuals avoided healthcare facilities. These factors conditioned the diagnosis of severe conditions,¹

including STI. The main objective of this study was to analyse the number of newly notified STI cases and HIV postexposure prophylaxis (PEP) in Barcelona during the COVID-19 pandemic.

A retrospective study including all cases of gonorrhoea, primary and secondary syphilis, lymphogranuloma venereum (LGV) and new HIV diagnoses reported to the Public Health Agency of Barcelona (ASPB), from January 2019 to September 2020, was carried out. The number of PEP prescribed in three university hospitals in Barcelona (Hospital del Mar, Hospital Vall d'Hebron and Hospital Sant Pau), during the same period, was also included as an indicator of unprotected sexual practices during the lockdown.

The evolution of cases for each STI was evaluated with multiple linear regression analysis with time as a covariate. Fisher's exact test was used to compare the numbers of diagnoses. The study protocol was approved by the institutional review board (2020/9420).

The demographic characteristics of the included patients are shown in Table 1. Cases of gonorrhoea decreased globally in a

Table 1 Clinical and epidemiological characteristics of the patients included in the study

	New diagnosis	n	Mean age	Male sex (%)	Transexual (%)	MSM (%)	HIV Coinfection
Gonorrhoea	Year 2019	3146	33	2675 (85.03%)	18 (0.57%)	1293 (71.79%)	436 (27.56%)
	(01/01–31/12)					/ND: 1345	/ND: 1564
	Year 2020	1563	33	1353 (86.73%)	5 (0.32%)	217 (62.54%) /	52 (18.98%)
	(01/01–30/09)			/ND: 3		ND: 1216	/ND: 1289
LGV	Year 2019	255	37.5	254 (99.61%)	1 (0.39%)	140 (95.89%)	92 (64.33%)
	(01/01–31/12)		/ND: 1			/ND: 109	
	Year 2020	144	38.54	141 (99.29%)	1 (0.70%)	40 (95.23%)	18 (45%)
	(01/01–30/09)		/ND: 2	/ND: 2		/ND: 102	/ND: 104
HIV	Year 2019	269	33.92	241 (89.59%)	0	216 (80.3%)	
	(01/01–31/12)						
	Year 2020	48	34.96	44 (91.67%)	1 (2.08%)	38 (79.17%)	
	(01/01–30/09)						
Primary syphilis	Year 2019	214	38	194 (90.65%)	7 (3.27%)	160 (84.21%)	80 (44.69%)
	(01/01–31/12)		/ND: 5			/ND: 24	/ND: 35
	Year 2020	90	37	83 (92.22%)	2 (2.22%)	40 (81.63%)	15 (33.33%)
	(01/01–30/09)		/ND: 1	/ND: 2		/ND: 41	/ND: 45
Secondary syphilis	Year 2019	242	38	233 (96.28%)	1 (0.41%)	187 (88.21%)	90 (42.25%)
	(01/01–31/12)		/ND: 3			/ND: 30	/ND: 29
	Year 2020	112	36	103 (93.64%)	2 (1.81%)	44 (84.61%)	24 (45.28%)
	(01/01–30/09)		/ND: 1	/ND: 2		/ND: 60	/ND: 59
Early syphilis	Year 2019	456	38	427 (93.65%)	8 (1.75%)	347 (86.32%)	170 (43.37%)
	(01/01–31/12)		/ND: 8			/ND: 54	/ND: 64
	Year 2020	202	36.5 /ND: 2	186 (93.94%)	4 (1.98%)	84 (83.17)	39 (39.8%)
	(01/01–30/09)		/ND: 2	/ND: 4		/ND: 101	/ND: 104

MSM, men who have sex with men; ND, non-data.

range of seven cases per month (beta change = -7 , P -value = 0.013), and a marked decrease was seen from March 2020 (beta change = -224 , $P < 0.001$; Fig. 1a). Accordingly, immediately after the lockdown, during the third week of March 2020, only 18 cases were notified (in contrast with 49 cases during the same week in 2019), which means a difference of 63%. No statistical differences were detected among urethral gonorrhoea in both weeks, whereas non-urethral gonorrhoea cases, which are commonly asymptomatic, showed a clear-cut reduction (seven cases in 2020 against 34 in 2019, $P < 0.005$). A significant plunge in LGV notifications from March 2020 can be seen (Fig. 1b). The number of early syphilis cases decreased in 2020 (1.2 cases per month, $P = 0.047$). No trend changes were observed from March 2020 onwards. However, in July 2020 there is a peak in primary syphilis diagnoses. The general trend is a decrease in the number of new HIV diagnoses in the study period (beta change -1.4 , $P < 0.001$), without significant differences from March 2020 (Fig. 1c). During July, August and September 2020, no new HIV diagnoses were reported. The number of prescribed PEP went from 321 in 2019 (238 from January to September) to 170 in 2020. During the lockdown period, prescriptions decreased significantly (Fig. 1g).

This study shows a marked decrease either in the newly reported STIs or in the number of PEP treatments in Barcelona from March to September 2020. A similar phenomenon has been observed in different nationally or locally based surveillance studies (the USA², Australia^{3,4}, Rome⁵ and London⁶). Conversely, in Milan a reduction in non-acute cases was noted.⁷ In Lebanon, an increase in PEP treatments was detected.⁸

In March 2020, a reduction of 63% in gonorrhoea notifications was noted, mainly attributable to asymptomatic cases. Probably these findings are the consequence of the stop of screening programmes and a decrease in the number of consultations, testing and/or notifications during the lockdown. The future impact of these events is unknown, but may result in an increase in new HIV diagnoses at later stages or in symptomatic STIs.

The main limitation of this work is its retrospective nature. Besides, the study is focused on notified cases, which may not reflect the real incidence. No information about PreP administration or discontinuation during the lockdown could be analysed.

In summary, a reduction in reported STI was detected. The decrement in the reported cases of gonorrhoea could be attributable to the underdiagnosis of asymptomatic cases. Further studies will confirm the consequences of these findings.

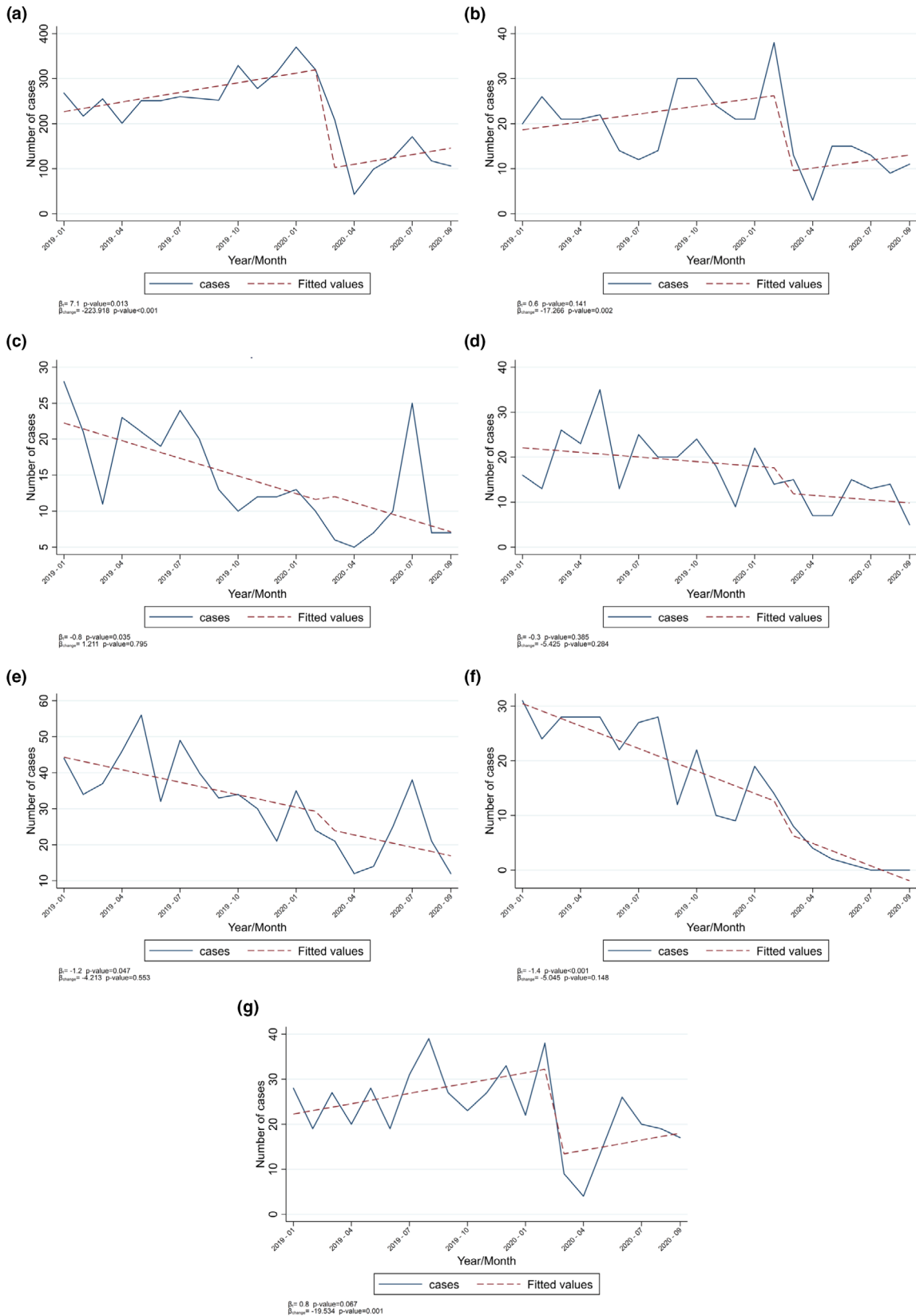


Figure 1 Evolution of notified STI in Barcelona, from January 2019 to September 2020. (a) Gonorrhoea cases, (b) LGV (c), primary syphilis, (d) secondary syphilis, (e) early syphilis, (f) HIV and (g) HIV postexposure prophylaxis.

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Conflict of interests


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Ethics approval

The study protocol was approved by the institutional review board of Hospital del Mar number 2020/9420.

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References

- Tarantini L, Navazio A, Cioffi G, Turiano G, Colivicchi F, Gabrielli D. Being a cardiologist at the time of SARS-COVID-19: is it time to reconsider our way of working? *G Ital Cardiol (Rome)* 2020; **21**: 354–357.
- Crane MA, Popovic A, Stolbach AI, Ghanem KG. Reporting of sexually transmitted infections during the COVID-19 pandemic. *Sex Transm Infect* 2021; **97**: 101–102.
- Hammoud MA, Grulich A, Holt M *et al*. Substantial decline in use of HIV preexposure prophylaxis following introduction of COVID-19 physical distancing restrictions in Australia: results from a prospective observational study of gay and bisexual men. *J Acquir Immune Defic Syndr* 2021; **86**: 22–30.
- Hammoud MA, Maher L, Holt M *et al*. Physical distancing due to COVID-19 disrupts sexual behaviors among gay and bisexual men in Australia: implications for trends in HIV and other sexually transmissible infections. *J Acquir Immune Defic Syndr* 2020; **85**: 309–315.
- Latini A, Magri F, Donà MG, Giuliani M, Cristaudo A, Zaccarelli M. Is COVID-19 affecting the epidemiology of STIs? The experience of syphilis in Rome. *Sex Transm Infect* 2021; **97**: 78.
- Junejo M, Girometti N, McOwan A, Whitlock G; on behalf of the Dean Street Collaborative Group. HIV postexposure prophylaxis during COVID-19. *Lancet* 2020; **7**: e460.
- Cusini M, Benardon S, Vidoni G, Brignolo L, Veraldi S, Mandolini PL. Trend of main STIs during COVID-19 pandemic in Milan, Italy. *Sex Transm Infect* 2021; **97**: 99.
- Maatouk I, Assi M, Jaspal R. Emerging impact of the COVID-19 outbreak on sexual health in Lebanon. *Sex Transm Infect* 2021; **97**: 318.

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The first dose of COVID-19 vaccine may trigger pemphigus and bullous pemphigoid flares: is the second dose therefore contraindicated?

Dear Editor,

During the COVID-19 pandemics, the management of immunosuppressed patients, those affected by autoimmune bullous diseases (AIBDs), became a matter of particular concern for healthcare systems; dissemination of sound and updated information became mandatory to orient physicians and more generally healthcare policy.^{1,2} Furthermore, AIBDs patients were encouraged to take advantage from teledermatological rather than in-person consultations; also, they were encouraged to undergo COVID-19 vaccination, preferably during remission periods or at least while under low immunosuppression.^{3,4} To date, data regarding the effect of COVID vaccines on AIBDs are