same pathogenic pathway and some clinical manifestations, including chilblains and retinal vasculopathy. In addition, this type I IFN response produces microvascular injury,[6] which has already been reported to be related to COVID-19 infection, and it could explain both chilblains and retinal vasculitis. Also, Kawasaki disease can share some similarities with COVID-19 infection. Both cause acral skin lesions, vasculitis and show increased serum interleukin 6 (IL-6) related to the immune response to the disease.[7] Also, there are other viral infections associated with Kawasaki disease, including other species of human coronaviruses.[8]

Other types of acral cutaneous lesions apart from chilblains have been reported in patients with COVID-19. This group includes cyanosis, blisters and gangrene in the feet and hands, primarily in adults. Nonetheless, these types of manifestations appear to be related to coagulation disorders in severe cases of COVID-19, and most carry poor prognosis.[9] Our analytical study was rigorously normal, with no poor prognostic data.

In summary, special attention should be devoted to children, despite most remaining asymptomatic in the early stages of the infection. Currently, we do not know whether there will be any other complications in the late stages of the disease and what is the real meaning of the described features. However, these types of manifestations in children appear to occur in the convalescence phase of the infection. Further studies are needed to provide more specific preventive measures and to standardize the short- and middle-term follow-up of these patients.

Conflict of interest

The other authors have no conflicts of interest to disclose.

Funding source

No funding was secured for this study.

Financial disclosure

All of the authors that appear and have contributed to this article have not any financial relationship relevant to this article to disclose.

Author contributions

Drs Quintana-Castanedo Feito-Rodríguez and Mayor-Ibarguren conceptualized and designed the study, coordinated and drafted the initial manuscript, and reviewed and revised the manuscript. Drs Fernández-Alcalde, Granados-Fernández, Montero-Vega and de Lucas-Laguna designed the data collection instruments, collected data, carried out the initial analyses, and reviewed and revised the manuscript. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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The patient in this manuscript has given written informed consent to publication of their case details.

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DOI: 10.1111/jdv.16801

STIs and the COVID-19 pandemic: the lockdown does not stop sexual infections

Editor

In December 2019, a novel coronavirus (SARS-CoV-2) emerged in Wuhan, China, responsible for an aggressive interstitial pneumonia.[1]

Italy was the first Western country to be hit by the coronavirus disease 2019 (COVID-19), and on 9 March, our Prime Minister

Table 1 Age, sex, disease, onset of symptoms and history of exposure in the described population during the Italian lockdown (9 March-4 May)

Patient	Age	Sex	STI	DoD	S.O.	RRSB	Note
1	25	M	*C. trachomatis*	11 March	12 February	NO	Condom breaking
2	26	M	*C. trachomatis*	25 March	16 March	NO	Known infection in the partner
3	32	M	*C. trachomatis*	25 March	15 March	YES	
4	30	M	*C. trachomatis*	8 April	25 April	YES	
5	26	M	*C. trachomatis*	8 April	14 March	YES	Unprotected sexual intercourse on 9 March
6	31	M	*C. trachomatis*	29 April	29 February	YES	*N.gonorrhoeae* 3 years before
7	28	F	*C. trachomatis*	10 March	N.S.	YES	Known infection in the partner
8	21	F	*C. trachomatis*	22 April	21 March	NO	Known infection in the partner
9	21	F	*C. trachomatis*	1 May	23 March	YES	
10	38	M	*N. gonorrhoeae*	16 March	6 March	YES	2 *N. gonorrhoeae* infections during lockdown with negative-tested partner
11	29	M	*N. gonorrhoeae*	25 March	15 March	YES	
12	45	M	Syphilis (Primary)	4 May	21 March	YES	Ongoing HIV-PrEP
13	59	M	Syphilis (Latent)	24 April	NS	NO	Last negative serology dated 2016
14	21	F	Syphilis (Latent)	3 April	NS	NO	Unprotected sexual intercourse in December 2019
15	53	F	Syphilis (Latent)	10 April	NS	NO	

DoD, date of diagnosis, F, female; M, male; N.S., no symptoms; PrEP, pre-exposure prophylaxis; RRSB, referred risky sexual behaviour during lockdown; S.O., (referred) symptoms/signs onset; STI, sexually transmitted infection.

announced a nationwide lockdown, strictly forbidding any contacts outside cohabitants, except for urgent or medical reasons. In compliance with the ministerial decree, all scheduled visits were suspended, maintaining hospital access only for emergencies.

While the initial guidelines to reorganize medical activities during the pandemic were focused on the management of inflammatory, autoimmune and neoplastic disorders, scarce attention was paid to sexually transmitted infections (STIs) and STI clinics.

We report here data of our STI clinic, one of the 12 Italian clinical sentinel sites for the surveillance of STIs, which is located in the Provincia Autonoma di Trento, the Italian district most affected by COVID-19 (cumulative incidence: 1007.77 cases/100 000 inhabitants).[2]

During the lockdown (9 March – 4 May), we diagnosed, by NAATs, 9 *Chlamydia trachomatis* infections and 2 *Neisseria gonorrhoeae* infections (one of these patients experienced a reinfection during the lockdown despite a negative-tested partner), and 4 cases of syphilis (Table 1).

Concerning the urethritis and cervicitis, symptoms were reported by 10 of 11 patients, while the last patient was asymptomatic but underwent testing because her partner had recently received a diagnosis of *C. trachomatis* infections. Regarding the cases of syphilis, 3 were latent, and 1 was primary. Of these 15 STIs, 9 patients referred risky sexual behaviour during lockdown. In the same period in 2019, we had diagnosed 17 STIs: 6 *C. trachomatis* infections, 7 *N. gonorrhoeae* infections, 1 concomitant infection of *C. trachomatis* and *N. gonorrhoeae*, and 3 latent syphilis. Therefore, the incidence was comparable, despite the unlimited number of daily accesses possible in 2019.

Common sense suggests that social isolation and the closure of leisure venues may significantly reduce the opportunity for casual sexual encounters, and some authors suggested that quarantine and social distancing measures might reduce the incidence of STIs in the future.[3]

However, our recent experience strengthened the lesson learned from the AIDS epidemic: 'not having sex is not an option'. Even though resources from health systems are often redirected in response to an outbreak, crucial healthcare services should remain accessible during public health emergencies.[4] Therefore, we suggest that visits of STI patients should not be cancelled, making use of teledermatology where possible and visiting any doubtful cases. Moreover, patients should not be discouraged to seek STI screening, because risky behaviours do not seem to decrease during the pandemic and, not least, a delay in diagnosis could result in sequelae and complications.

Finally, our key message is a reiteration, referred to STIs, of the WHO Director-General's words during the pandemic: 'We have a simple message for all countries: test, test, test'.[5]

All authors have agreed to the contents of the manuscript in its submitted form.

Acknowledgements

The authors thank Alessandra Iadicicco, who made it possible to perform the study. The patients in this manuscript have given written informed consent to publication of their case details.

Funding sources

None.

Conflict of interest

The authors have no conflict of interest to disclose.

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DOI: 10.1111/jdv.16808

Drug reaction with eosinophilia and systemic symptoms syndrome in a patient with COVID-19

Dear Editor

Skin rashes associated with COVID-19 include eruptions induced by drugs prescribed for management of this infection. We report a case of drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome in a patient with COVID-19.

A 50-year-old man was admitted to the intensive care unit for pneumonia with acute respiratory distress syndrome. COVID-19 was confirmed by positive RT-PCR SARS-CoV-2 on nasopharyngeal swabs and later by positive IgM and IgG antibodies against SARS-CoV-2 (114.5 AU/mL). In the context of fever >38.5°C, nine days after admission, the patient developed a generalized maculopapular rash on more than 70% of his body surface area with oedema of hands and face (Fig. 1). Azithromycin and hydroxychloroquine had been initiated 18 and 17 days, respectively, prior to the skin eruption. The patient had also received the following drugs: heparin, propofol, clonidine, norepinephrine, sufentanil and rocuronium (at admission); pantoprazole (9 days before); sevoflurane (8 days before); cefuroxime (6 days before); and flucloxacillin (4 days before). Laboratory tests revealed a new elevation of C-reactive protein (CRP) level (349 mg/L; nl. <5 mg/L), high absolute blood eosinophilia (950/μL; nl. <600/μL), atypical lymphocytes (120/μL) and elevated D-dimer (7343 ng/mL; nl. <500 ng/mL). Moreover, patient presented abnormal renal function (blood urea nitrogen 93 mg/mL, serum creatinine 1.37 mg/dL) and altered liver tests [elevated serum aspartate amino transferase (ASAT): 59 U/L; nl. <35, and gamma glutamyl transferase (GGT): 579 U/L; nl. <60]. Serologic investigations carried out 8 days after the beginning of the eruption for Epstein-Barr virus (EBV) and cytomegalovirus (CMV), and after 11 days for human immunodeficiency virus (HIV), and hepatitis B and C were negative. Histopathological analysis of skin biopsy specimens showed oedema of the dermis associated with moderate perivascular infiltrate including lymphohistiocytic cells and eosinophils, suggestive of a DRESS. According to the scoring system for classifying DRESS cases (RegiSCAR) reported by Kardaun *et al.*,[1] a drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome was diagnosed as follows: fever ≥38.5°C (0), enlarged lymph nodes (0), eosinophilia (1), atypical lymphocytes (1), skin rash extent >50% body surface area (1), skin rash suggesting DRESS (1), biopsy suggesting DRESS (0), organ involvement (liver, kidney, lung) (2), resolution ≥15 days (0), viral titers (HBV/HCV) negative (1). The prognosis of DRESS in our patient was considered severe according to the severity and prognosis scoring system proposed by Mizukawa *et al.*[2] with a total score in the early phase (calculated during the first 3 days of the eruption) of 8 (>4) as follows: age (0), duration of drug exposure after onset (1), erythema >70% BSA (1), erosion, <10% BSA (0), fever >38.5°C during >7 days (2), appetite loss (<70% of regular food intake) (1), renal dysfunction (creatinine) (1), liver dysfunction (ALT) (0), C-reactive protein (2).

All suspected drugs (in particular azithromycin and hydroxychloroquine) had already been stopped and intravenous corticosteroids were administered (methylprednisolone 1 mg/kg/day).

Progressive resolution (over more than 15 days) of the exanthema and systemic involvement (inflammatory, haematological, hepatic, renal) was observed with gradual tapering of corticosteroid therapy (80 mg/day for 9 days; 40 mg/day for 11 days; 20 mg/day for 11 days; 8 mg/day for 5 days), and the patient was discharged from ICU 3 weeks later.

RT-PCR SARS-CoV-2 RNA performed on skin samples as well as sequential RT-PCR SARS-CoV-2 RNA performed on nasopharyngeal swabs after the resolution of the symptoms was negative.

DRESS syndrome is a severe cutaneous adverse drug reaction. Usually, the rash appears 3–8 weeks after the initial administration of the drug. In the present case, many drugs were administered. However, from a chronological point of view, hydroxychloroquine and azithromycin, used for their probable antiviral activity against SARS-CoV-2, were most likely

