

esis. Although further studies will be required to clarify the pathomechanism of IVMP, the present case will help extend our knowledge about IVMP. ■

Disclosures. Funding: none. Conflicts of interest: none.

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doi:10.1684/ejd.2020.3906

Urticaria as a first clinical manifestation of COVID-19

Cutaneous manifestations associated with coronavirus disease 2019 (COVID-19) have been recently described [1-3].

Table 1. Cases of urticaria associated with COVID-19.

Reference	No. of cases	Gender	Age	Clinical manifestations
Zhang et al. [4]	2	NS	NS	NS
Recalcati [5]	3	NS	NS	NS
Fernández-Nieto et al. [6]	1	F	32	NS
Henry et al. [7]	1	F	27	Odynophagia, diffuse arthralgia, fever, chills, chest pain
van Damme et al. [8]	2	M	71	Weakness, fever, hypoxemia, chest pain, ankle pain, atrial fibrillation, tachycardia
		F	39	Fever, chills, myalgia, headache, rhinorrhoea, dry cough, dyspnoea
Bouaziz et al. [9]	1	NS	NS	NS
Quintana-Castanedo et al. [10]	1	M	61	Fever

NS: not specified; F: female; M: male.

Urticaria was first reported in two of 140 patients (1.4%) infected by severe acute respiratory syndrome- coronavirus-2 (SARS-CoV-2) from Wuhan, China [4]. Some additional cases (only adults of both genders) have been subsequently published [5-10] (table 1). In some cases, urticaria preceded respiratory manifestations of COVID-19 [7,8]. We present three cases of acute urticaria that appeared some days before symptoms of COVID-19.

Two men aged 38 and 46 and a 42-year-old woman were admitted to our outpatient department with a diagnosis of acute urticaria. All patients were in good general health and were not taking therapeutic systemic drugs. Medical history was negative for previous or concomitant allergic diseases; no inducing factors were detected. Dermatological examination showed several erythematous wheals, of different morphology and size, mainly involving the limbs. Wheals lasted for a period of minutes to four hours. Neither angioedema nor macular-papular lesions were observed. All patients complained of more or less severe pruritus. General physical examination did not reveal anything pathological, and laboratory tests were performed. Cetirizine (20 mg/day) was prescribed, and after three to seven days, all patients developed headache, weakness, arthralgia, myalgia, fever and dry cough. Laboratory examinations revealed lymphopenia and increased erythrocyte sedimentation rate. Pharyngeal swabs were positive for SARS-CoV-2. Chest X-ray was negative. All patients were followed at home by their general practitioners. The female patient was treated with azithromycin (500 mg/day), hydroxychloroquine (400 mg/day), paracetamol (2 g/day) and cetirizine (20 mg/day). The other patients were treated with paracetamol (3 g/day) and cetirizine (20 mg/day). Remission of urticaria was observed from five to seven days later. The general clinical picture improved from three to six weeks later. All patients are currently well.

Based on the reported cases of urticaria in COVID-19 patients, no definitive conclusions may be drawn regarding association between the two disorders. However, urticaria, as in our patients, can be the first clinical presentation of COVID-19, in the absence of other symptoms and signs

[7, 8]. This is very important because these patients can unknowingly infect other persons and contribute to the spread of the infection: their isolation is therefore necessary [8]. Further studies are required to establish whether urticaria involves mainly the limbs (as in our patients and those reported by other authors [7, 10]), itching is mild [5, 10] (also in one of our patients) and whether it is possible that urticaria, as a first clinical manifestation, occurs in patients with COVID-19 of mild to moderate severity [5, 8]. ■

Disclosures. Funding source: none. Conflicts of interest: none.

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doi:10.1684/ejd.2020.3907

Safety of biologics for psoriasis patients during the COVID-19 pandemic: the experience from Wuhan, China

Patients with psoriasis have an increased risk of systemic comorbidities, which may be associated with the develop-

ment of severe manifestations of coronavirus disease 2019 (COVID-19) [1, 2]. However, the risk of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection for the subset of psoriasis patients on biologic therapies remains unclear [3]. Continuing biologic therapy during the COVID-19 pandemic is an area of concern and inquiry for patients and providers [4, 5].

Wuhan, the epicentre of the outbreak in China, reported more than 50,000 confirmed cases of COVID-19. The local government enforced strict lockdown measures from January 23rd to April 8th, 2020. We set out to conduct a survey of psoriatic patients receiving biologic treatments in Wuhan City. Self-administered, online questionnaires were sent out to 118 registered psoriatic patients through smartphones (WeChat). In total, 107 patients completed the questionnaires (response rate: 90.7%) during March 2020, revealing 102 cases of psoriasis vulgaris (95.3%), three cases of erythrodermic psoriasis (2.8%), and two cases of pustular psoriasis (1.9%). The average age was 39.99 ± 1.29 years (range: 15-86 years) and there were 73 males (68.2%). Forty-three (40.2%) patients had underlying comorbidities, including 15 (14.0%) with psoriatic arthritis, 10 (9.3%) with hypertension, 16 (15.0%) with obesity ($BMI > 27.5 \text{ kg/m}^2$) [6], and five (4.7%) patients with diabetes. Additionally, 14 (13.1%) patients had at least two comorbidities. IL-17 inhibitors were used in 90 patients (84.1%) and TNF- α inhibitors were used in 17 patients (15.9%).

The survey showed that none of the 107 patients with psoriasis were diagnosed with COVID-19, including 55 (51.4%) patients who were either local residents or had travelled to Wuhan after November 2019. Since the government of Wuhan City administered a comprehensive SARS-CoV-2 nucleic acid test on 11 million citizens in May 2020, we conducted telephone interviews for our patients in July 2020. One hundred and two patients completed this follow-up; 90 (88.2%) patients underwent the nucleic acid amplification test and 61 patients (59.8%) underwent the antibody test, all reported as negative.

Two patients with psoriatic arthritis (table 1) developed fever during the COVID-19 pandemic. A 35-year-old woman with a history of tuberculosis, receiving adalimumab (80 mg monthly) injections, was hospitalized in an isolation ward and became afebrile after treatment with antibiotics. The second was a 37-year-old man on secukinumab therapy (300 mg monthly), who received antibiotic treatment as an outpatient, and recovered. Four patients (3.7%) had a history of close contact with a COVID-19 patient, but none of these patients developed any COVID-19 symptoms. Notably, a 16-year-old girl on secukinumab therapy (150 mg monthly), whose mother and grandparents had confirmed COVID-19 infection, had negative serologic and radiologic screening tests. We subsequently learned that she was in the habit of wearing a facemask even around family members, and washed her hands frequently.

We also analysed the possible reasons why the patients in our study did not contract COVID-19. Firstly, the majority of patients (99 cases, 92.5%) were younger than 60 years of age. Secondly, most patients (64 cases, 59.8%) did not have underlying comorbidities. Also, many patients rigorously followed infection control guidelines. Moreover, in our cohort, IL-17 inhibitors, which have been reported to be comparatively less immunosuppressive [7], were prescribed more often than TNF- α