

Clinical detection and description of the socio-demographic characteristics of the SARS-CoV-2 omicron variant in the population of the Sierra Sur of Oaxaca

Detección clínica y descripción de las características sociodemográficas de la variante SARS-CoV-2 ómicron en población de la Sierra Sur de Oaxaca

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To the Editor,

Omicron is a concerning variant of SARS-CoV-2 that has a mild clinical course^{1,2}. We present a cross-sectional study of 628 patients infected with the Omicron variant, diagnosed by RT-q-PCR (real-time quantitative polymerase chain reaction) multiplex with TaqMan clade-specific probes, enrolled from January through April 2022, originating from the Sierra Sur region of Oaxaca (Table 1). All patients (100%) presented with vascular headache, dry cough, arthralgia, myalgia, asthenia, adynamia, and nasal congestion. Diarrhea lasting 1-2 days was observed in 80% of patients, while 98% had fever localized to the head and neck with oxygen saturation levels of 92-95%. Paresthesia in the upper and lower limbs, accompanied by tingling and burning sensations, was reported in 28% of patients, and 12% experienced vomiting for 1-2 days or within the first 5 days of symptom onset. As previously undescribed findings, 80% of patients exhibited vasculitis throughout the palate. The anterior palate appeared salmon or pale pink in color (Fig. 1), while the posterior palate had a violaceous

hue with diffuse vesicular enanthem. Petechiae in the oropharynx accompanied by diffuse vesicular enanthem on the pharyngeal arch and base of the tongue were observed in 10.03% of cases. Additionally, 10.03% of patients exhibited an ulcerative exudative palate and oropharynx with petechiae in the oral cavity. Three phenotypes were identified: a mild phenotype, resembling flu-like symptoms (lineages BA.2 and BA.2.12.1), in 20.06% of cases; a moderate phenotype with macroangiopathy (lineages BA.2.12 and BA.2.9), in 60.01% of cases; a severe phenotype (lineages Delta AY.4/Omicron BA.1 [Deltacron], BA.5, BA.4, and BA.1), characterized by microangiopathic damage (peripheral neuropathy, nephropathy, and venous insufficiency) and macroangiopathic damage (ocular telangiectasias), in 19.90% of cases. The Deltacron variant was exclusive to the 11-68-year-old age group. Treatment response was observed in 79.93% of patients following a protocol consisting of OM-85 every 12 hours for 21 days, calcium dobesilate 500 mg every 12 hours for 2 months, ibuprofen 800 mg every 12 hours for 10 days, and a single

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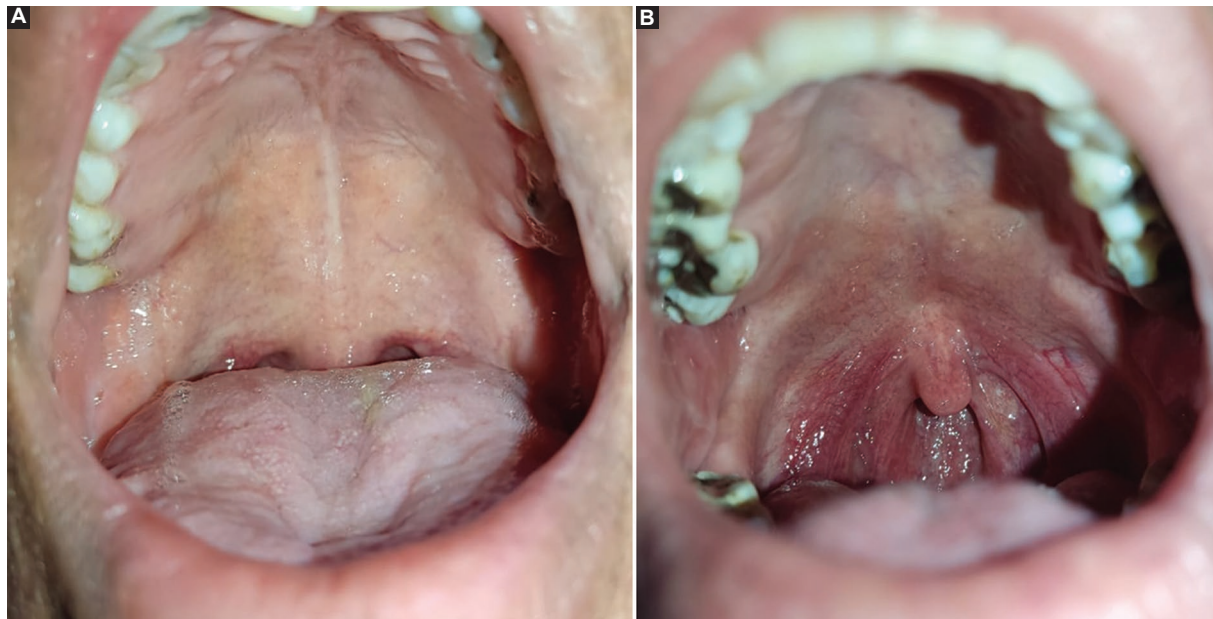


Figure 1. A: vascular proliferation in the posterior palate, with a salmon coloration and vesicular enanthem. **B:** the posterior palate has a violaceous color, accompanied by a diffuse palatopharyngeal vesicular enanthem, highly characteristic of diabetic patients with Omicron.

Table 1. Sociodemographic and clinical variables of the SARS-CoV-2 omicron variant in the population of the Sierra Sur of Oaxaca

Sociodemographic and Clinical Variables	Percentage	Number of Subjects
Age		
0-10 years	10.98%	69/628
11-68 years	89.02%	559/628
Sex		
Male	23.89%	150/628
Female	76.11%	478/628
Residence		
Rural	79.94%	502/628
Urban	20.06%	126/628
Vaccinated vs SARS-CoV-2	96.97%	609/628
Education Level		
No schooling	2.07%	13/628
Kindergarten	9.87%	62/628
Primary school	46.97%	295/628
Secondary school	17.03%	107/628
High school	24.04%	151/628
Higher education	0%	0/628
Hospitalized	0%	0/628
Outpatient management	100.00%	628/628
Comorbidities		
Obesity	2.07%	13/628
Type 2 diabetes mellitus	46.97%	295/628
Systemic arterial hypertension	17.04%	107/628
Asthma and allergic problems	24.04%	151/628

intramuscular dose of dexamethasone 8 mg. Only 20.03% required antihistamines and cephalosporin with bromhexine due to superimposed bacterial infections. Oral hypoglycemic agents were used for diabetic patients.

This is the first study ever conducted to describe the clinical features of the Omicron variants of SARS-CoV-2. It highlights that these variants can be clinically detected through an oral cavity examination and that their subvariants are not benign, as patients exhibit microangiopathic and macroangiopathic damage.

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Conflicts of interest

The authors declare no conflicts of interest.

Ethical disclosures

Protection of human and animal subjects. The authors declare that the procedures followed were in accordance with the ethical standards of the responsible human experimentation committee and with the World Medical Association and the Declaration of Helsinki.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols, obtained informed consent from patients, and have the approval of the Ethics Committee. The recommendations of the SAGER

guidelines were followed, according to the nature of the study.

Declaration on the use of artificial intelligence. The authors declare that no generative artificial intelligence was used in the writing of this manuscript.

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