CARTAS AL EDITOR

SARS-CoV-2 infection among Mexican healthcare workers

Dear editor: Healthcare workers (HCW) have been the first-line defense against pandemic SARS-CoV-2 infection, for this reason, they are highly exposed and possibly have the greatest risk of contagion.[1]

We present results from a transversal study of healthcare personnel working at a Covid-19 hospital in Mexico, Hospital Civil de Guadalajara Dr. Juan I. Menchaca, who were exposed to SARS-CoV-2 from March 2020 to February 2021. Symptomatic HCW underwent RT-PCR (*DeCoV19 Triplex* kit) to identify SARS-CoV-2 viral load and their symptoms and medical history were registered.

We performed 3 024 RT-PCR tests, mean age at testing was 38 ±11 years, with a range from 18 to 67 years. Test results were positive in 1 128 (37.3%) samples; 704 were in female and 424 in male. HCW were more prone to respiratory affections in June and July, nevertheless, results were more often positive in November, December, and January (19 vs. 97%). Reinfections occurred in 30%.

Clinical presentation and medical history association with a positive test are detailed in table I. Symptoms related to a positive test were fever, headache, and cough. Obesity was the only condition positively asso-

Table I
SARS-CoV-2 test and symptoms/medical history in healthcare workers at Hospital Civil de Guadalajara. Mexico, March 2020-February 2021

Feature	*SARS-CoV2 positive/negative (n=3 024)*	*Crude OR (95%CI)*	*Adjusted* OR (95%CI)*	*p*‡
Symptoms				
Fever	514/91	16.6(13.04-21.12)	3.07(2.26-4.17)	0.0001
Headache	802/216	19.1(15.8-23.17)	2.54(1.87-3.43)	0.0001
Cough	698/147	19.3(15.7-32.75)	2.46(1.81-3.35)	0.0001
Odynophagia	650/152	15.6(12.72-19.12)	1.8(1.34-2.43)	0.0001
Rhinorrhea	650/127	18.9(15.27-23.49)	2.6(1.94-3.54)	0.01
Conjunctivitis	375/56	16.3(12.2-21.94)	1.64(1.14-2.36)	0.007
Chest pain	299/49	13.5(9.94-18.59)	1.39(0.93-2.10)	0.1
Dyspnea	111/33	6.16(4.14-9.15)	0.56(0.33-0.97)	0.03
Tachypnea	102/23	8.0(5.11-12.8)	0.7(0.41-1.35)	0.3
Diarrhea	310/81	8.49(6.56-10.99)	1.18(0.84-1.65)	0.33
Medical history				
Diabetes	70/87	1.37(0.99-1.90)	1.18(0.83-1.66)	0.34
Hypertension	109/135	1.3(1.07-1.81)	1.15(0.87-1.52)	0.31
Asthma	91/125	1.2(0.93-1.64)	1.26(0.94-1.68)	0.11
COPD	5/18	0.46(0.17-1.25)	0.32(0.11-0.90)	0.31
Obesity	249/195	2.4(2.01-3.03)	2.4(2.01-3.05)	0.0001
Smoking	141/282	0.8(0.65-1.01)	0.77(0.62-0.96)	0.02

OR: odds ratio; 95%CI: 95% confidence interval; COPD: chronic obstructive pulmonary disease.
* OR was adjusted for symptoms and medical history.
‡ Xi^2 test for adjusted OR, $p<0.05$.

ciated with SARS-CoV-2 infection [OR= 2.4 (IC95% 2.01,3.03)], [aOR= 2.4 (IC95% 2.01,3.05)]. Five HCW (four female and one male) underwent assisted mechanical ventilation and amines. All were obese, two had hypertension, and one had diabetes. Two women died, a 64 year obese with pulmonary hypertension, and a 54 year obese with diabetes.

Our findings are in agreement with studies that described similar infection rates among HCW and the general population; possibly because protective personal equipment (PPE) provides an additional barrier.[1,2] HCW in our study had SARS-CoV-2 infection rates similar to European facilities.[1,2] This result is impressive considering Mexico is the country with the most infections in HCW and also with the highest death rates.[3] This outcome could be associated with an early March 2020 PPE distribution and training at our institution in comparison with the rest of the country (May 2020).[4]

We concluded that more relaxed social distancing measures and lack or inadequate use of PPE were contagion determinants among HCW. Also, we found the clinical presentation and medical history related to SARS-CoV-2 infection in HCW similar to those observed in the general population; obesity is the single most important factor to determine both, a positive test, and a serious outcome.

Declaration of conflict of interests. The authors declare that they have no conflict of interests.

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Covid-19 en personal de salud asociado con tener turnos prolongados y ser médico en formación

Señor editor. El personal de salud tiene alto riesgo de presentar Covid-19.[1] En México, hasta el 19 de julio se reportaron 244 711 casos y 4 084 muertes en este grupo laboral,[2] de modo que los médicos en formación, internos de pregrado y residentes también presentan altas incidencias de esta enfermedad.[3]

En este trabajo se presentan los resultados de un estudio observacional realizado con el objetivo de estimar la incidencia de Covid-19 en personal de salud del Hospital General Regional Vicente Guerrero del Instituto Mexicano del Seguro Social (IMSS) en Acapulco. Se realizaron 591 encuestas entre junio y agosto de 2020, con muestreo no probabilístico. Se preguntaron datos sociodemográficos, síntomas y realización de prueba de Covid-19. Con la información, se realizó un análisis univariado, bivariado y multivariado.

La incidencia de casos sintomáticos (refirieron síntomas respiratorios) fue de 36.7% (218) y de sospechosos (cumplieron definición operacional vigente al momento del estudio)[4] de 22.5% (133). El 11.1% (66) del total, 30.4% (66) de los casos sintomáticos y 42.9% (57) de los sospechosos refirieron que se les realizó prueba para SARS-CoV-2. La incidencia de casos confirmados fue de 7.6% (45) del total, 20.7% de los sintomáticos y 33.8% de los sospechosos.

Los síntomas más frecuentes referidos por los casos sospechosos fueron cefalea 96% (128), mialgias 79.7% (106), fiebre 75.9% (101), tos 74.4% (99) y dolor de garganta 74.4% (99); en casos confirmados, cefalea 97.8% (44), fiebre 88.5% (40), mialgias 86.7% (39), artralgias 75.6% (34), tos 71.1% (32) y dolor de garganta 71.1% (32). Refirió hospitalización 0.84% (5, todos confirmados) del total, lo que sugiere que la estrategia de aislamiento implementada por el IMSS fue efectiva.

Los puestos de trabajo con mayor incidencia de casos sospechosos