

Clinical epidemiological characterization of patients affected by COVID-19 in a General Hospital of Veracruz, Mexico

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Background

Since the beginning of the pandemic and its passage through the different affected continents, there have been differences in the presentation depending in part on the characteristics of each population, so it is important to know how it behaves in the local population.

Methods

Clinical-epidemiological study in adults hospitalized for suspected COVID-19 at the General Hospital 71 of the City of Veracruz, Mexico, from April to December 2020. Demographic and clinical characteristics are studied, as well as a comparative and stratified analysis was performed by intubation and death.

Results

1212 patients are included, 53% are men, average age 49 years. 20.5% reported sudden onset of symptoms; the most frequent: fever (79.8%), headache (75.2%), cough (71%), myalgia (62%), arthralgia (58%) and dyspnea (46.3%). Comorbidities were reported in 54.7%, the most frequent: Hypertension (29.2%), Diabetes (29.1%) and obesity (13.9%). Regarding the outcomes, 120 (9.9%) required intubation and 300 (25%) died. Men requiring intubation were significantly older than women [62.5 vs 37.5%; $p = 0.027$]. The mean age of the intubated patients was higher compared to that of the non-intubated [60.5 vs 44.8 years; $p = 0.001$]. The male gender had a risk association for intubation. The group aged 60 years or older compared to those aged 59 years or younger had a higher risk of intubation. Clinical variables that had a risk association with intubation were dyspnea, chest pain and prostration. Among comorbidities, hypertension and diabetes had a risk association with intubation. Female gender and headache had a protective association for intubation. In addition, odynophagia, rhinorrhea, and abdominal pain showed a protective association for intubation. There was no difference in terms of gender by death. The mean age of the patients who died was significantly older [64.5 vs 43.8 years; $p = 0.001$]. The clinical variables that had a risk association with death were: dyspnea, chest pain, polypnea, cyanosis and prostration. The protective variables were: rhinorrhea, odynophagia, headache and conjunctivitis.

Conclusion

By studying a population affected by COVID, its own characteristics and inherent risks can be known to help take local diagnosis and treatment strategies that ensure a better outcome for those affected.

OR for death.

Variable	OR	IC 95%	P
Demographic variables			
Woman	0.832	0.640 – 1.081	0.168
Man	1.203	0.925 – 1.546	0.168
Age \geq 70 years	7.139	5.120 – 9.954	0.001
Age 60 to 69 years	3.779	2.747 – 5.197	0.001
Age 50 to 59 years	1.068	0.747 – 1.528	0.717
Age 40 to 49 years	0.397	0.257 – 0.613	0.001
Age 30 to 39 years	0.129	0.071 – 0.234	0.001
Age <30 years	0.024	0.006 – 0.097	0.001
Clinical picture at admission			
sudden start	0.855	0.614 – 1.191	0.354
Fever	1.243	0.887 – 1.740	0.206
Cough	1.250	0.931 – 1.680	0.138
headache	0.746	0.557 – 1.000	0.050
Odynophagia	0.724	0.544 – 0.964	0.027
Attack on the general state	1.125	0.866 – 1.462	0.378
Myalgia	0.956	0.731 – 1.250	0.743
Arthralgia	1.019	0.781 – 1.328	0.891
Prostration	3.413	1.490 – 7.818	0.004
runny nose	0.630	0.435 – 0.913	0.015
chill	0.853	0.638 – 1.141	0.285
Abdominal pain	0.991	0.646 – 1.521	0.967
Conjunctivitis	0.589	0.327 – 1.061	0.078
Dyspnoea	7.000	5.131 – 9.550	0.001
Cyanosis	4.670	1.648 – 13.231	0.004
Diarrhea	0.949	0.693 – 1.298	0.742
chest pain	1.589	1.217 – 2.075	0.001
polypnea	4.670	1.648 – 13.231	0.004
Coryza	1.356	0.415 – 4.435	0.615
Anosmia	0.789	0.318 – 1.956	0.609
dysgeusia	0.724	0.294 – 1.782	0.482
Pneumonia	4.125	3.184 – 5.579	0.001
Previous comorbidities			
Chronic disease	3.552	2.642 – 4.777	0.001
Hypertension	3.425	2.602 – 4.507	0.001
Diabetes	3.655	2.732 – 4.891	0.001
Obesity	1.288	0.898 – 1.849	0.169
heart disease	1.273	0.593 – 2.735	0.535
Asthma	0.664	0.331 – 1.335	0.251
chronic kidney disease	1.673	0.731 – 3.827	0.224
COPD	6.027	2.657 – 13.670	0.001
immunosuppression	2.586	1.106 – 6.048	0.028
HIV	2.038	0.622 – 6.277	0.215
Tuberculosis	NE	NE	NE
Cancer	1.523	0.278 – 8.360	0.628
Other diseases	1.283	0.766 – 2.147	0.344
Pregnancy and assoc variables			
Pregnancy	0.333	0.077 – 1.445	0.142
Puerperium	NE	NE	NE
Lactation	NE	NE	NE

OR FOR INTUBATION.

Variable	OR	IC 95%	p
Demographic variables			
Woman	0.646	0.438 – 0.952	0.027
Man	1.549	1.051 – 2.283	0.027
Age \geq 70 years	3.140	2.070 – 4.764	0.001
Age 60 to 69 years	2.597	1.702 – 3.961	0.001
Age 50 to 59 years	0.971	0.573 – 1.645	0.912
Age 40 to 49 years	0.749	0.433 – 1.298	0.303
Age 30 to 39 years	0.272	0.131 – 0.566	0.001
Age <30 years	0.037	0.005 – 0.268	0.001
Clinical picture at admission			
sudden start	1.038	0.648 – 1.662	0.876
Fever	1.475	0.887 – 2.453	0.136
Cough	1.168	0.684 – 1.578	0.857
headache	0.652	0.434 – 0.980	0.039
Odynophagia	0.695	0.455 – 1.062	0.093
Attack on the general state	1.252	0.858 – 1.825	0.244
Myalgia	0.838	0.572 – 1.230	0.367
Arthralgia	0.985	0.672 – 1.444	0.938
Prostration	3.328	1.286 – 8.610	0.013
runny nose	0.571	0.321 – 1.018	0.058
chill	1.103	0.735 – 1.656	0.635
Abdominal pain	0.507	0.231 – 1.112	0.090
Conjunctivitis	0.368	0.368 – 1.813	0.619
Dyspnoea	5.394	3.394 – 8.570	0.001
Cyanosis	1.407	0.314 – 6.310	0.656
Diarrhea	0.886	0.558 – 1.408	0.609
chest pain	1.500	1.025 – 2.197	0.037
polypnea	1.407	0.314 – 6.310	0.656
Coryza	2.774	0.753 – 10.223	0.125
Anosmia	0.669	0.157 – 2.847	0.586
dysgeusia	0.621	0.146 – 2.637	0.519
Pneumonia	3.555	2.420 – 5.221	0.001
Previous comorbidities			
Chronic disease	2.998	1.932 – 4.652	0.001
Hypertension	2.833	1.933 – 4.151	0.001
Diabetes	2.087	1.395 – 3.122	0.001
Obesity	1.443	0.881 – 2.365	0.146
heart disease	1.273	0.593 – 2.735	0.535
Asthma	1.120	0.470 – 2.673	0.798
chronic kidney disease	1.673	0.731 – 3.827	0.224
COPD	1.192	0.352 – 4.029	0.778
immunosuppression	2.057	0.685 – 6.182	0.199
HIV	NE	NE	NE
Tuberculosis	NE	NE	NE
Cancer	1.827	0.212 – 15.768	0.584
Another disease	NE	NE	NE
Pregnancy and assoc variables			
Pregnancy	1.011	0.232 – 4.412	0.988
Puerperium	NE	NE	NE
Lactation	NE	NE	NE