Manifestaciones Clínicas COVID-19

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Wang XF, Yuan J, Zheng YJ, et al. [Clinical and epidemiological characteristics of 34 children with 2019 novel coronavirus infection in Shenzhen]. *Zhonghua Er Ke Za Zhi*. 2020;58:E008.

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Coronavirus

Commonly circulating coronaviruses

HCoVs-229E, HKU1, NL63, OC43

Severe acute respiratory syndrome

SARS-CoV

SARS CoV2: 2% afectados < 19 años

Coronaviruses

Middle East respiratory syndrome

MERS-CoV

Appeared 2012 in Saudi Arabia
32% children reported household contact
42% children asymptomatic
91-100% children have fever
Case-fatality rate adults 20-40%, children 6%

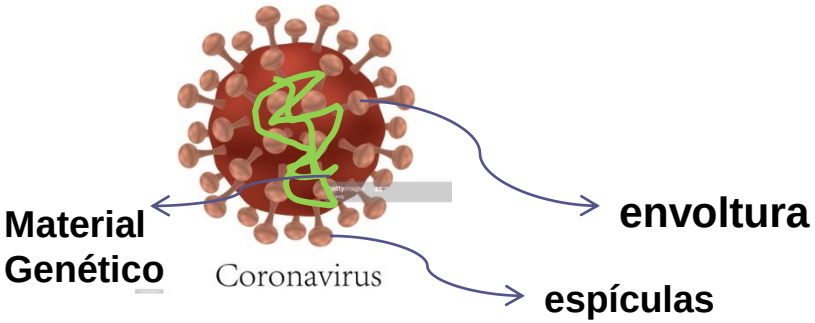
COVID-19

SARS-CoV-2

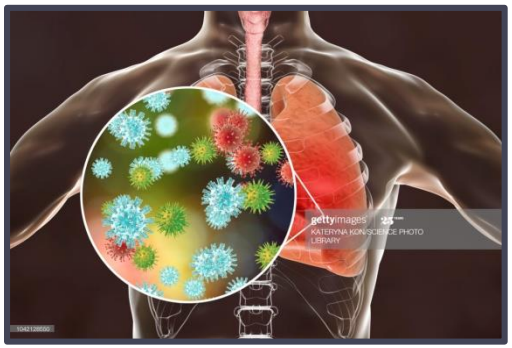
Appeared 2019 in China
82% children reported household contact
10% children asymptomatic
44-50% children have fever
Case-fatality rate adults 0.9-3%, children 0%

Coronavirus

Coronavirus humanos endémicos:
alfa:229E y NL63
Beta: OC43 y HKU1
Causan 10 a 30 % de las Infecciones respiratoria



Circulación de Marzo a Noviembre
con pico fin de invierno-inicio de primavera.



Clínica: resfrío común, fiebre, rinitis, faringitis, laringitis, otitis, cefalea, bronquiolitis, neumonía y 75% síntomas gastrointestinales (vómitos, diarrea, dolor abdominal).

Transmisión persona-persona

Cuadros respiratorios
-Resfrío común
- Neumonía

Cuadros gastrointestinales
Leves

Cuadros Cardiológicos

Cuadros Neurológicos

JAMA 2020,323(8):707-708

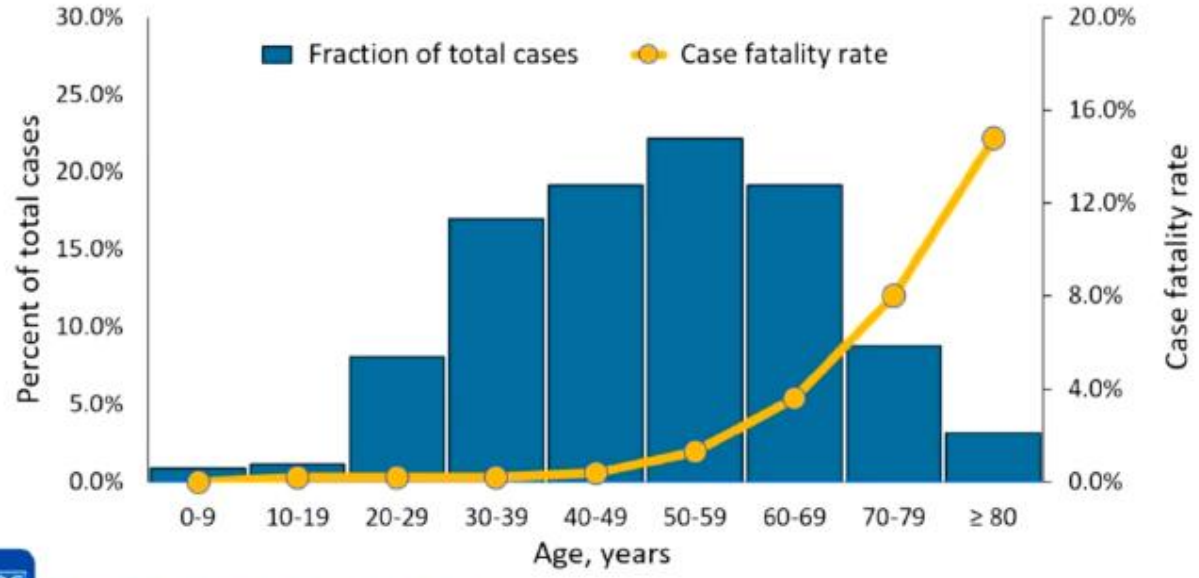
¿Qué sabemos de Covid-19?

- Período de incubación: 2 a 14 días, a partir del contacto con la persona enferma (5 a 6 días) hasta 24 días.
- Modo de transmisión: gotitas, contacto y fómites.
- Ingresa por mucosa bucal, nasal o conjuntival. NO establecida la transmisión vertical o por leche materna
- Tasa de ataque: 10% al inicio del brote – 3% con aislamiento precoz.
- Ro: 2-3 (capacidad de una persona de transmitir a otras)
- Tasa de Letalidad: 2- 3%

Etiología	Casos notificados	Fallecidos	Tasa de letalidad
Influenza estacional	3 – 5 millones	290.000 – 650.000	0,1%
SARS	8.098	774	9,5%
MERS	2.494	858	35%
COVID-19	126.254*	4.637	2% - 3,7%

Euro serviel 2020;25:7-11

Age Distribution and Case Fatality Rate COVID-19 China through 11-Feb-2020 (N = 44,672 confirmed cases)

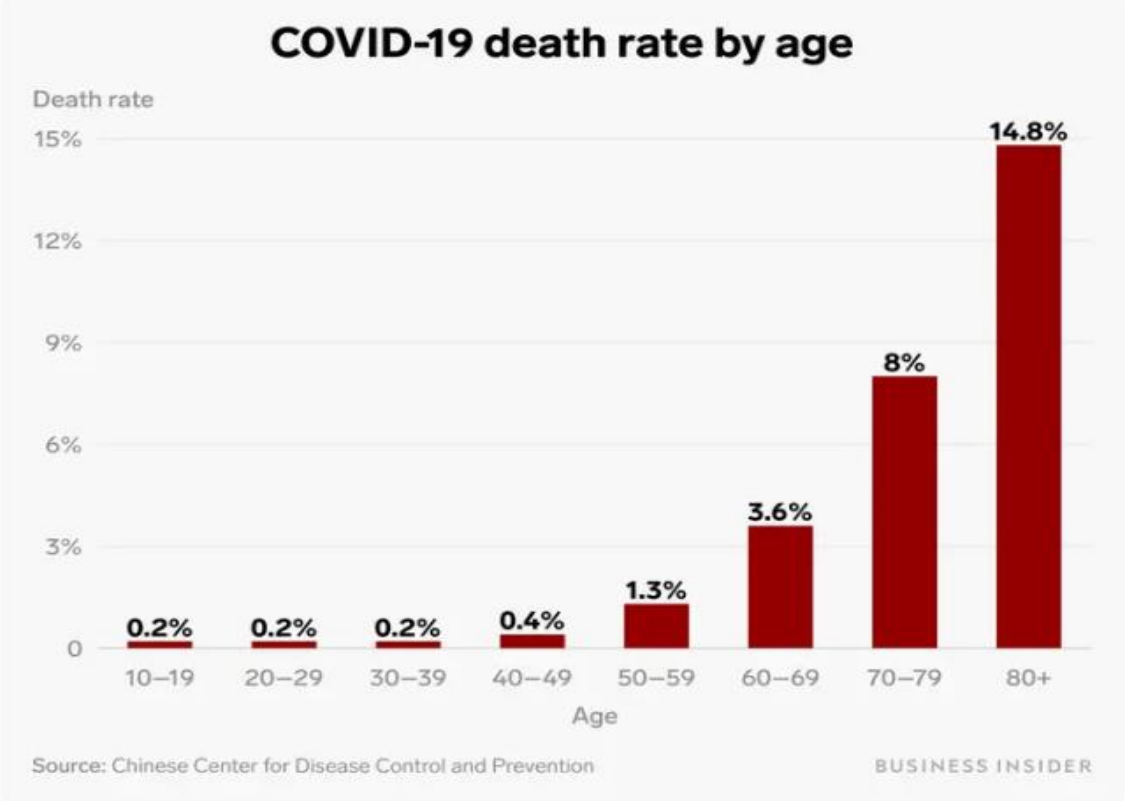


CDC

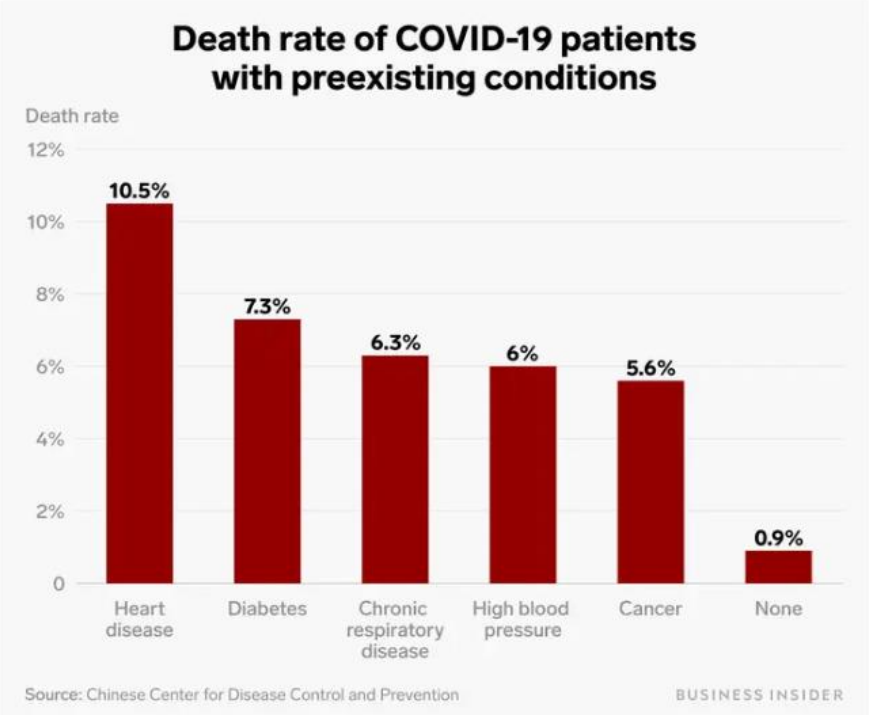
adapted from Zhang 2020, China CDC Weekly Rep; 2(8):113-122.

For live Q & A at the end of the session, please email Questions to: CROIroom312@gmail.com #virtualCROIQandA5501

Afectados por edad COVID-19

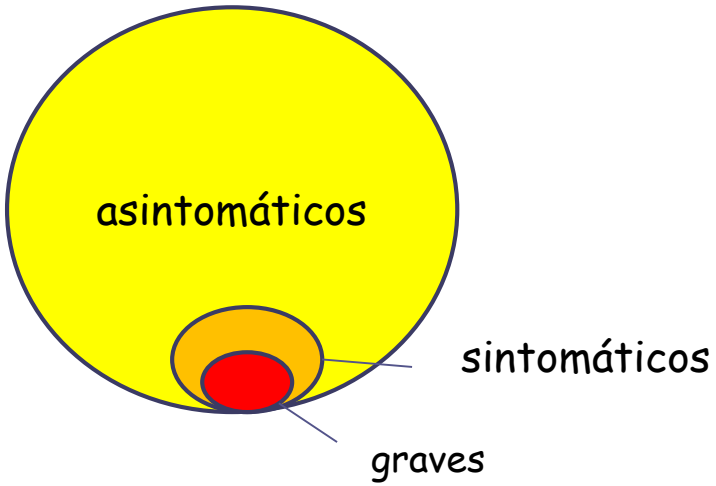


Muertes por Afecciones Pre-existentes COVID-19



Manifestaciones clínicas:COVID-19

- Aún no se conocen todas sus manifestaciones clínicas.
- Puede presentarse como, una infección asintomática o respiratoria leve hasta una infección respiratoria severa con neumonía, falla renal y muerte.
- Adultos:81% asintomáticos o leves, 15% sintomáticos y 5% graves.
- Síntomas: fiebre, tos y taquipnea.



Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study

	Patients (n=99)
Age, years	
Mean (SD)	55·5 (13·1)
Range	21–82
≤39	10 (10%)
40–49	22 (22%)
50–59	30 (30%)
60–69	22 (22%)
≥70	15 (15%)
Sex	
Female	32 (32%)
Male	67 (68%)
Occupation	
Agricultural worker	2 (2%)
Self-employed	63 (64%)
Employee	15 (15%)
Retired	19 (19%)
Exposure to Huanan seafood market*	49 (49%)
Long-term exposure history	47 (47%)
Short-term exposure history	2 (2%)
Chronic medical illness	50 (51%)
Cardiovascular and cerebrovascular diseases	40 (40%)
Digestive system disease	11 (11%)
Endocrine system disease†	13 (13%)
Malignant tumour	1 (1%)
Nervous system disease	1 (1%)
Respiratory system disease	1 (1%)
Admission to intensive care unit	23 (23%)
Clinical outcome	
Remained in hospital	57 (58%)
Discharged	31 (31%)
Died	11 (11%)

Data are n (%) unless specified otherwise. 2019-nCoV=2019 novel coronavirus. *Long-term exposure is having worked at or lived in or around Huanan seafood market, whereas short-term exposure is having been to Huanan seafood market occasionally. †12 were diabetic.

Table 1: **Demographics, baseline characteristics, and clinical outcomes of 99 patients admitted to Wuhan Jinyintan Hospital (Jan 1–20, 2020) with 2019-nCoV pneumonia**

	Patients (n=99)
Signs and symptoms at admission	
Fever	82 (83%)
Cough	81 (82%)
Shortness of breath	31 (31%)
Muscle ache	11 (11%)
Confusion	9 (9%)
Headache	8 (8%)
Sore throat	5 (5%)
Rhinorrhoea	4 (4%)
Chest pain	2 (2%)
Diarrhoea	2 (2%)
Nausea and vomiting	1 (1%)
More than one sign or symptom	89 (90%)
Fever, cough, and shortness of breath	15 (15%)
Comorbid conditions	
Any	33 (33%)
ARDS	17 (17%)
Acute renal injury	3 (3%)
Acute respiratory injury	8 (8%)
Septic shock	4 (4%)
Ventilator-associated pneumonia	1 (1%)
Chest x-ray and CT findings	
Unilateral pneumonia	25 (25%)
Bilateral pneumonia	74 (75%)
Multiple mottling and ground-glass opacity	14 (14%)
Treatment	
Oxygen therapy	75 (76%)
Mechanical ventilation	
Non-invasive (ie, face mask)	13 (13%)
Invasive	4 (4%)
CRRT	9 (9%)
ECMO	3 (3%)
Antibiotic treatment	70 (71%)
Antifungal treatment	15 (15%)
Antiviral treatment	75 (76%)
Glucocorticoids	19 (19%)
Intravenous immunoglobulin therapy	27 (27%)

2019-nCoV=2019 novel coronavirus. ARDS=acute respiratory distress syndrome. ECMO=extracorporeal membrane oxygenation. CRRT=continuous renal replacement therapy.

Table 2: **Clinical characteristics and treatment of patients with 2019-nCoV pneumonia**

Table 1. Clinical Characteristics of the Study Patients, According to Disease Severity and the Presence or Absence of the Primary Composite End Point.*

Characteristic	All Patients (N = 1099)	Disease Severity		Presence of Primary Composite End Point†	
		Nonsevere (N = 926)	Severe (N = 173)	Yes (N = 67)	No (N = 1032)
Age					
Median (IQR) — yr	47.0 (35.0–58.0)	45.0 (34.0–57.0)	52.0 (40.0–65.0)	63.0 (53.0–71.0)	46.0 (35.0–57.0)
Distribution — no./total no. (%)					
0–14 yr	9/1011 (0.9)	8/848 (0.9)	1/163 (0.6)	0	9/946 (1.0)
15–49 yr	557/1011 (55.1)	490/848 (57.8)	67/163 (41.1)	12/65 (18.5)	545/946 (57.6)
50–64 yr	292/1011 (28.9)	241/848 (28.4)	51/163 (31.3)	21/65 (32.3)	271/946 (28.6)
≥65 yr	153/1011 (15.1)	109/848 (12.9)	44/163 (27.0)	32/65 (49.2)	121/946 (12.8)
Female sex — no./total no. (%)	459/1096 (41.9)	386/923 (41.8)	73/173 (42.2)	22/67 (32.8)	437/1029 (42.5)
Smoking history — no./total no. (%)					
Never smoked	927/1085 (85.4)	793/913 (86.9)	134/172 (77.9)	44/66 (66.7)	883/1019 (86.7)
Former smoker	21/1085 (1.9)	12/913 (1.3)	9/172 (5.2)	5/66 (7.6)	16/1019 (1.6)
Current smoker	137/1085 (12.6)	108/913 (11.8)	29/172 (16.9)	17/66 (25.8)	120/1019 (11.8)
Exposure to source of transmission within past 14 days — no./total no.					
Living in Wuhan	483/1099 (43.9)	400/926 (43.2)	83/173 (48.0)	39/67 (58.2)	444/1032 (43.0)
Contact with wildlife	13/687 (1.9)	10/559 (1.8)	3/128 (2.3)	1/41 (2.4)	12/646 (1.9)
Recently visited Wuhan‡	193/616 (31.3)	166/526 (31.6)	27/90 (30.0)	10/28 (35.7)	183/588 (31.1)
Had contact with Wuhan residents‡	442/611 (72.3)	376/522 (72.0)	66/89 (74.2)	19/28 (67.9)	423/583 (72.6)
Median incubation period (IQR) — days§	4.0 (2.0–7.0)	4.0 (2.8–7.0)	4.0 (2.0–7.0)	4.0 (1.0–7.5)	4.0 (2.0–7.0)
Fever on admission					
Patients — no./total no. (%)	473/1081 (43.8)	391/910 (43.0)	82/171 (48.0)	24/66 (36.4)	449/1015 (44.2)
Median temperature (IQR) — °C	37.3 (36.7–38.0)	37.3 (36.7–38.0)	37.4 (36.7–38.1)	36.8 (36.3–37.8)	37.3 (36.7–38.0)
Distribution of temperature — no./total no. (%)					
<37.5°C	608/1081 (56.2)	519/910 (57.0)	89/171 (52.0)	42/66 (63.6)	566/1015 (55.8)
37.5–38.0°C	238/1081 (22.0)	201/910 (22.1)	37/171 (21.6)	10/66 (15.2)	228/1015 (22.5)
38.1–39.0°C	197/1081 (18.2)	160/910 (17.6)	37/171 (21.6)	11/66 (16.7)	186/1015 (18.3)
>39.0°C	38/1081 (3.5)	30/910 (3.3)	8/171 (4.7)	3/66 (4.5)	35/1015 (3.4)
Fever during hospitalization					
Patients — no./total no. (%)	975/1099 (88.7)	816/926 (88.1)	159/173 (91.9)	59/67 (88.1)	916/1032 (88.8)
Median highest temperature (IQR) — °C	38.3 (37.8–38.9)	38.3 (37.8–38.9)	38.5 (38.0–39.0)	38.5 (38.0–39.0)	38.3 (37.8–38.9)
<37.5°C	92/926 (9.9)	79/774 (10.2)	13/152 (8.6)	3/54 (5.6)	89/872 (10.2)
37.5–38.0°C	286/926 (30.9)	251/774 (32.4)	35/152 (23.0)	20/54 (37.0)	266/872 (30.5)
38.1–39.0°C	434/926 (46.9)	356/774 (46.0)	78/152 (51.3)	21/54 (38.9)	413/872 (47.4)
>39.0°C	114/926 (12.3)	88/774 (11.4)	26/152 (17.1)	10/54 (18.5)	104/872 (11.9)

NEJM Marzo 2020

Symptoms — no. (%)					
Conjunctival congestion	9 (0.8)	5 (0.5)	4 (2.3)	0	9 (0.9)
Nasal congestion	53 (4.8)	47 (5.1)	6 (3.5)	2 (3.0)	51 (4.9)
Headache	150 (13.6)	124 (13.4)	26 (15.0)	8 (11.9)	142 (13.8)
Cough	745 (67.8)	623 (67.3)	122 (70.5)	46 (68.7)	699 (67.7)
Sore throat	153 (13.9)	130 (14.0)	23 (13.3)	6 (9.0)	147 (14.2)
Sputum production	370 (33.7)	309 (33.4)	61 (35.3)	20 (29.9)	350 (33.9)
Fatigue	419 (38.1)	350 (37.8)	69 (39.9)	22 (32.8)	397 (38.5)
Hemoptysis	10 (0.9)	6 (0.6)	4 (2.3)	2 (3.0)	8 (0.8)
Shortness of breath	205 (18.7)	140 (15.1)	65 (37.6)	36 (53.7)	169 (16.4)
Nausea or vomiting	55 (5.0)	43 (4.6)	12 (6.9)	3 (4.5)	52 (5.0)
Diarrhea	42 (3.8)	32 (3.5)	10 (5.8)	4 (6.0)	38 (3.7)
Myalgia or arthralgia	164 (14.9)	134 (14.5)	30 (17.3)	6 (9.0)	158 (15.3)
Chills	126 (11.5)	100 (10.8)	26 (15.0)	8 (11.9)	118 (11.4)
Signs of infection — no. (%)					
Throat congestion	19 (1.7)	17 (1.8)	2 (1.2)	0	19 (1.8)
Tonsil swelling	23 (2.1)	17 (1.8)	6 (3.5)	1 (1.5)	22 (2.1)
Enlargement of lymph nodes	2 (0.2)	1 (0.1)	1 (0.6)	1 (1.5)	1 (0.1)
Rash	2 (0.2)	0	2 (1.2)	0	2 (0.2)
Coexisting disorder — no. (%)					
Any	261 (23.7)	194 (21.0)	67 (38.7)	39 (58.2)	222 (21.5)
Chronic obstructive pulmonary disease	12 (1.1)	6 (0.6)	6 (3.5)	7 (10.4)	5 (0.5)
Diabetes	81 (7.4)	53 (5.7)	28 (16.2)	18 (26.9)	63 (6.1)
Hypertension	165 (15.0)	124 (13.4)	41 (23.7)	24 (35.8)	141 (13.7)
Coronary heart disease	27 (2.5)	17 (1.8)	10 (5.8)	6 (9.0)	21 (2.0)
Cerebrovascular disease	15 (1.4)	11 (1.2)	4 (2.3)	4 (6.0)	11 (1.1)
Hepatitis B infection¶	23 (2.1)	22 (2.4)	1 (0.6)	1 (1.5)	22 (2.1)
Cancer‖	10 (0.9)	7 (0.8)	3 (1.7)	1 (1.5)	9 (0.9)
Chronic renal disease	8 (0.7)	5 (0.5)	3 (1.7)	2 (3.0)	6 (0.6)
Immunodeficiency	2 (0.2)	2 (0.2)	0	0	2 (0.2)

* The denominators of patients who were included in the analysis are provided if they differed from the overall numbers in the group. Percentages may not total 100 because of rounding. Covid-19 denotes coronavirus disease 2019, and IQR interquartile range.
† The primary composite end point was admission to an intensive care unit, the use of mechanical ventilation, or death.
‡ These patients were not residents of Wuhan.
§ Data regarding the incubation period were missing for 808 patients (73.5%).
¶ The presence of hepatitis B infection was defined as a positive result on testing for hepatitis B surface antigen with or without elevated levels of alanine or aspartate aminotransferase.
‖ Included in this category is any type of cancer.

Wang XF, Yuan J, Zheng YJ, et al. [Clinical and epidemiological characteristics of 34 children with 2019 novel coronavirus infection in Shenzhen]. *Zhonghua Er Ke Za Zhi*. 2020;58:E008.

Presentación Clínica COVID-19 en Niños

- ✓ 82% de los niños tenían un contacto familiar
- ✓ Promedio edad: 8 años 11 meses

- ❖ Asintomática 9%
- ❖ Sintomática leve: casos leves 26%, casos comunes 65% (en general dura 1 o 2 semanas).
- Fiebre (50%)
- Tos: puede ser o no productiva (38%)
- Mialgias
- Fatiga
- Disnea
- Hemoptisis
- Síntomas respiratorios altos: rinorrea, dolor de garganta
- Cefalea
- Síntomas gastrointestinales: vómitos, dolor abdominal y diarrea

- ➢ Todos se recuperaron no hubo fallecidos
- ➢ El rol de los niños en la transmisión no se pudo determinar

Wang XF, Yuan J, Zheng YJ, et al. [Clinical and epidemiological characteristics of 34 children with 2019 novel coronavirus infection in Shenzhen]. *Zhonghua Er Ke Za Zhi*. 2020;58:E008.

- G. Blancos: 82% Normal

  5 casos >10.000/L, 1 caso<4000/L, 1 caso neutropenia y linfopenia
- LDH aumentada(>400 U/L): 10 casos
- TAC tórax: múltiples parches bilaterales, vidrio esmerilado, infiltrados hiliares y opacidades subpleurales.
- Tratamiento: 20 ptes Lopi/ritonavir
- Conclusiones: las manifestaciones clínicas fueron leves e inespecíficas. La TAC ayudo en el temprano diagnóstico aún sin clínica. El contagio fue a través de un familiar adulto cercano.

Clinical and CT features in pediatric patients with COVID-19 infection: Different points from adults

TABLE 1 Summary of patient characteristics (n = 20)

Characteristic	Number (%)
Sex	
Boy	13 (65%)
Girl	7 (35%)
Age	
<1 mo	3 (15%)
1 mo to 1 y	6 (30%)
1-3 y	5 (25%)
3-6 y	3 (15%)
>6 y	3 (15%)
Contact history	
Yes	13 (65%)
Uncertainty	7 (35%)
Symptom	
Fever	12 (60%)
Cough	13 (65%)
Diarrhea	3 (15%)
Nasal discharge	3 (15%)
Sore throat	1 (5%)
Fatigue	1 (5%)
Vomiting	2 (10%)
Tachypnea	2 (10%)

X Edad: 2 años

Pediatric Pulmonology. 2020;1–6.

Clinical and CT features in pediatric patients with COVID-19 infection: Different points from adults

Other findings	
Sinus tachycardia	1 (5%)
Epilepsy as a sequela of previous viral encephalitis	1 (5%)
History of atrial septal defect surgery	2 (10%)
Atrial arrhythmia	1 (5%)
First-degree atrioventricular block, atrial and ventricular premature beat	1 (5%)
Incomplete right bundle-branch block	1 (5%)

Pediatric Pulmonology. 2020;1–6.

Clinical and CT features in pediatric patients with COVID-19 infection: Different points from adults

TABLE 2 Laboratory information of pediatric patients with COVID-19 infection

Parameter	Number of patients (%)
WBC, $\times 10^9$/L	
<5.50	4 (20%)
5.50-12.20	14 (70%)
>12.20	2 (10%)
L%	
<45	7 (35%)
45-65	10 (50%)
>65	3 (15%)
CRP, mg/L	
≤3	13 (65%)
>3	7 (35%)
PCT, mg/L	
≤0.05	4 (20%)
>0.05	16 (80%)
ALT, IU/L	
≤40	15 (75%)
>40	5 (25%)
CK-MB, IU/L	
≤25	15 (75%)
>25	5 (25%)
Coinfection pathogen	
Cytomegalovirus	1 (5%)
Influenza B virus	2 (10%)
Influenza A virus	1 (5%)
Mycoplasma	4 (20%)
Respiratory syncytial virus	1 (5%)

Abbreviations: ALT, alanine aminotransferase; CK-MB, creatine kinase-MB; CRP, C-reactive protein; L%, percentage of lymphocyte; PCT, procalcitonin; WBC, white blood cell.

Pediatric Pulmonology. 2020;1–6.

Clinical and CT features in pediatric patients with COVID-19 infection: Different points from adults

TABLE 3 CT imaging findings in 20 patients with COVID-19 pneumonia in early stage

Findings	Number of patients (%)
Pulmonary lesions	
Null	4 (20%)
Unilateral	6 (30%)
Bilateral	10 (50%)
Subpleural lesions	
Seen	20 (100%)
Not seen	0 (0%)
Consolidation with surrounding halo sign	10 (50%)
Ground-glass opacities	12 (60%)
Fine mesh shadow	4 (20%)
Tiny nodules	3 (15%)

Abbreviations: COVID, coronavirus; CT, computed tomography.

Clinical and CT features in pediatric patients with COVID-19 infection: Different points from adults

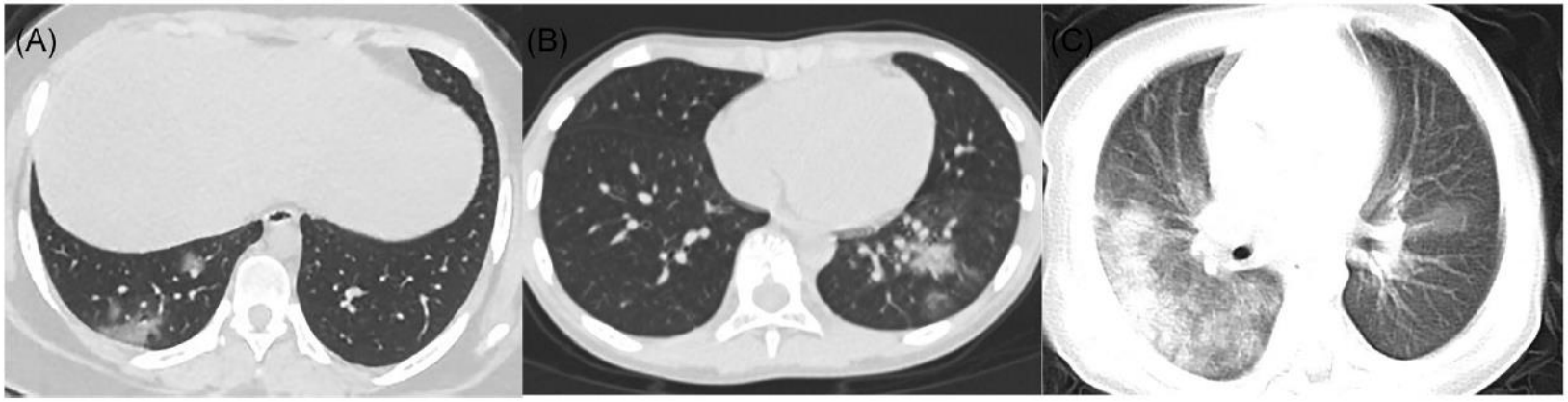


FIGURE 1 A, Female, 14 years old. Chest CT showed scattered ground-glass opacities in the inferior lobe of the right lung, located subpleural or extended from subpleural lesions. B, Male, 10 years old. Chest CT showed consolidation with halo sign in the inferior lobe of the left lung surrounded by ground-glass opacities. C, Male, 1 year old. Chest CT showed diffused consolidations and ground-glass opacities in both lungs, with a "white lung" appearance of the right lung. CT, computed tomography

Conclusiones: la elevación de la PCT, el patrón imagenológico de nódulo de consolidación con halo y las coinfecciones fueron frecuentes en pediatría. Las imágenes por TAC preceden a la clínica

Recomendaciones de Diagnóstico y tratamiento para Infección Respiratoria en Pediatría para COVID-19

Clasificación Clínica

- **Tipo Leve:**

  Aquellos con infección asintomática o infección respiratoria alta y neumonía leve. Síntomas: fiebre, tos, dolor de garganta, fatiga, cefalea y mialgia.

  TAC: signos de neumonía.

- **Neumonía Severa:**

  - FR >70/min (≤1 año),FR ≥50/min(>1 año)
  - Hipoxia: SpO2 ≤93%(<90% prematuros) o aleteo nasal. Retracciones intercostal, subcostal y supraesternal, cianosis, apnea.
  - Gases en sangre PaO2 <60mmHg PaCO2 > 50 mmHg
  - Conciencia: letárgia, coma, convulsiones
  - Hiporéxia y deshidratación
  - Otras manifestaciones: alteraciones de la coagulación (TP), daño miocardio (enzimas), disfunción gastrointestinal, elevación enzimas hepáticas y rabdomiólisis.

Word Journal of Pediatrics. February 2020

Recomendaciones de Diagnóstico y tratamiento para Infección Respiratoria en Pediatría para COVID-19

Casos Críticos

- Falla respiratoria con requirimiento de ARM
- Shock séptico
- Falla mutiorgánica

Word Journal of Pediatrics. February 2020

Diagnóstico Diferencial con otras Infecciones Virales

Some symptoms of COVID-19 overlap with those of the common cold, allergies, and the flu, which can make it tricky to diagnose without a test.

COVID-19 compared to other common conditions

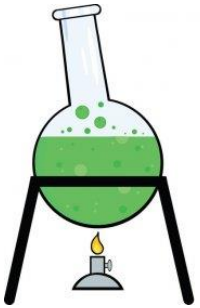
SYMPTOM	COVID-19	Resfrío	Gripe	Alergia
Fever	Common	Rare	Common	Sometimes
Dry cough	Common	Mild	Common	Sometimes
Shortness of breath	Common	No	No	Common
Headaches	Sometimes	Rare	Common	Sometimes
Aches and pains	Sometimes	Common	Common	No
Sore throat	Sometimes	Common	Common	No
Fatigue	Sometimes	Sometimes	Common	Sometimes
Diarrhea	Rare	No	Sometimes*	No
Runny nose	Rare	Common	Sometimes	Common
Sneezing	No	Common	No	Common

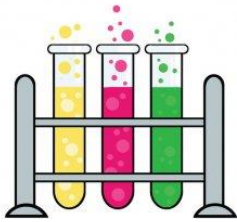
*Sometimes for children

Sources: CDC, WHO, American College of Allergy, Asthma and Immunology

BUSINESS INSIDER

Diagnóstico:COVID-19





- PCR-RT

Toma de Muestras

- Esputo
- LBA
- Hisopado Nasofaríngeo
- Aspirado Nasofaríngeo
- Materia fecal

Hisopos torunda de dacron, naylon, viscosa con manguito de plástico.

No de algodón

Si las muestras por aspirado o hisopado nasofaringeo son negativas, realizar las del tracto respiratorio inferior

DIAGNÓSTICO DE LABORATORIO

IMPORTANTE:

- Solo se procesaran muestras que cumplan con la definición de caso sospechoso.
- Se debe remitir la muestra con los datos completos según Ficha de notificación, investigación epidemiológica y pedido de estudios de laboratorio
- El caso y los estudios de laboratorio deberán notificarse al Sistema Nacional de Vigilancia de la Salud por SNVS 2.0

Tratamiento

- **Lopinavir+Ritonavir** (20/34) 56% de los niños

Wang XF, Yuan J, Zheng YJ, et al. [Clinical and epidemiological characteristics of 34 children with 2019 novel coronavirus infection in Shenzhen]. *Zhonghua Er Ke Za Zhi*. 2020;58:E008.

- **Ac. Monoclonales:** inhiben la fusión de la spícula S, responsable de la interacción virus-célula
- **Cloroquina:** aumenta el PH endosomal inhibiendo la fusión virus-célula y su entrada. Interfiere en la glicosilación de receptores celulares del virus. Es un inmunomodulador
- **Inhibidores de la síntesis RNA**
- **Interferon-a2b nebulizaciones**

(*Pediatr Infect Dis J* 2020;XX:00–00)

13 de Marzo 2020

ENFERMEDADES INFECCIOSAS
H.U RAMÓN Y CAJAL

Tabla 3. Fármacos activos frente a CoV-2 y dosificación.

Fármaco	**Nombre comercial**	**Dosis**		**Duración**[1]
Lopinavir/ritonavir	Kaletra Solución	200/50 mg 2 comp /12 h 5 mL / 12 h	Oral	14 días
Interferon beta-1b	Betaferon Extavia	0.25 mg / 48 h	Subcutáneo	14 días
Hidroxicloroquina	Dolquine[2]	200 mg /12 h	Oral	5-14 días
Remdesivir	Remdesivir[3]	100 mg / 24 h	Intravenoso	No definida
Tocilizumab	Aztemra	400 mg	Intravenoso	Máximo 3 infusiones

1. Duración máxima recomendada.

2. Primera dosis de carga 400 mg (2 comprimidos cada 12 horas el primer día) luego 200 mg cada 12 horas durante 5-14 días

3. Dosis de carga 200 mg el primer día.

Tabla 4. Pautas de tratamiento de la infección por CoV-2.

Tipo de infección	Tratamiento	Comentario
Infección leve (no neumonía) No comorbilidad	Sintomático	
Infección leve (no neumonía) Comorbilidad*[1]	Hidroxicloroquina + Lopinavir/ritonavir*[2]	
Neumonía leve CURB-65 ≤1 y SatO2 ≥90%	Hidroxicloroquina + Lopinavir/ritonavir*[2] Rápida progresión +Interferon beta-1b*[3]	
Neumonía grave o alto riesgo de mortalidad (rápida progresión) CURB-65 ≥2 SatO2 <90% Frecuencia respiratoria ≥30	Hidroxicloroquina +Lopinavir/ritonavir*[2] +Interferon beta-1b*[3] Remdesivir*[4]	+ Valorar Tocilizumab** individualizadamente.

*[1]EPOC, enfermedad cardiovascular, diabetes, neoplasia, hepatopatía crónica, inmunosupresión o edad >60 años.
*[2] Lopinavir/ritonavir considerar SIEMPRE INTERACCIONES consultar www.covid19-druginteractions.org y EFECTOS ADVERSOS GASTROINTESTINALES (diarrea, naúseas y vómitos).
*3 Evitar uso en pacientes con enfermedad psiquiátrica o depresión grave
*[4] Sólo en uso compasivo previa solicitud que por requisitos se realizará generalmente en Cuidados Intensivos. Inclusión: PCR hospitalizado+VMI. Exclusión: Fracaso multiorgánico, Drogas vasoactivas, Transas>5 límite, ClCr<30, otros antivirales

Lopinavir/ritonavir (200mg/50mg)

- 7-15 kg 12mg/3mg/kg
- 15-40Kg 10mg/2,5mg/kg
- >40Kg 400mg/100mg 2 veces/día

Duración 1 o 2 semanas

Word Journal of Pediatrics. February 2020

Vacunas

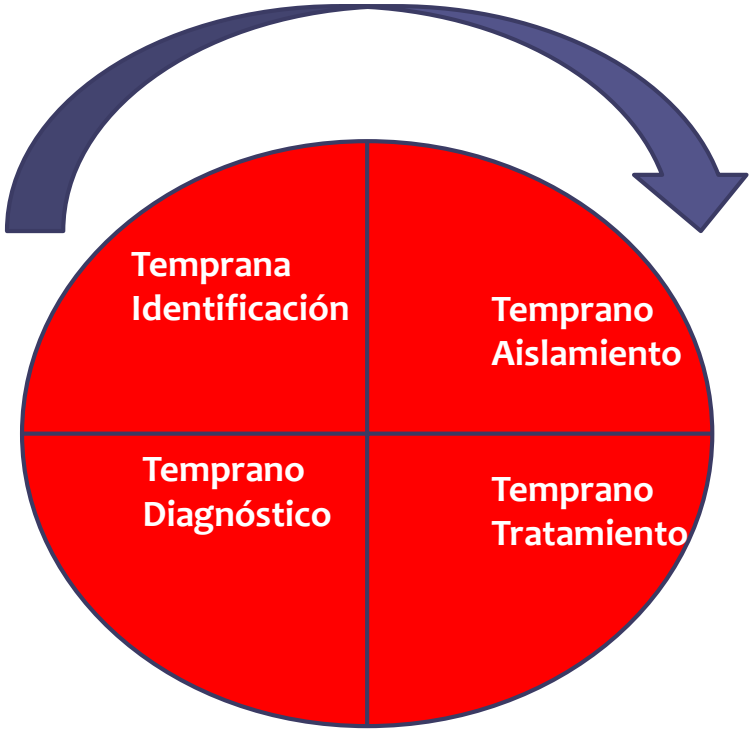
- **Vacunas vivas atenuadas:** alteración del gen E o por reorganización del genoma. Robusta respuesta humoral y celular.
- **Vacunas inactivadas:** aumento de anticuerpos neutralizantes
- **Vacunas recombinantes y subunidad:** son antígenos purificados combinados con adjuvantes como la glicoproteína S, RBD (receptor de unión), Pr nucleocápside. Vacunas intranasal.

(*Pediatr Infect Dis J* 2020;XX:00–00)

Resumen…

- La mayoría de los niños son asintomáticos o sintomáticos leves.
- La mayoría de los niños tiene fiebre baja o moderada. Cerca del 40% no tiene fiebre.
- Los síntomas gastrointestinales son más frecuentes.
- La mayoría evoluciona favorablemente en 1 a 2 semanas.
- Un pequeño porcentaje evoluciona rapidamente a un cuadro de distress respiratorio en 1 a 3 días.
- No hay muertes en niños.
- G. Blancos: usualmente normal al inicio, puede evolucionar a la leucopenia con linfopenia.
- PCR: N ó aumentada.
- PCT: N elevada en sobreinfección bacteriana.
- Rx tórax: múltiples parches e infiltrados insterticial.
- TAC tórax: vidrio esmerilado y consolidaciones en la periferia del pulmón.

Principios del Manejo



Muchas gracias