



Rates of Co-infection Between SARS-CoV-2 and Other Respiratory Pathogens

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QUEL EST LE TAUX DE CO-INFECTIONS DU SARS-COV-2?

Méthode:

Tous patients (enfants/adultes) symptomatiques (par ex. toux, fièvre, dyspnée) co-testés (c-à-d. influenza A/B, RSV, autres coronavirus, adénovirus, parainfluenza 1-4, méta-pneumovirus humain, rhinovirus/ entérovirus, Chlamydia pneumoniae & Mycoplasma pneumoniae, inclusivement) en Californie du Nord

Résultats: 1217 échantillons pour 1206 patients.

- 116 (9.5%) positifs pour SARS-CoV-2:
 - 24 (20.7%) positifs pour >= 1 autre(s) pathogène(s)
 - Surtout:
 - Rhinovirus/entérovirus (6,9%)
 - RSV (5.2%)
 - Autres coronavirus (4.3%)
- Peu de différence entre les patients SARS-CoV-2 avec co-infections VS. sans
- Aucune différence significative en terme de co-infections des échantillons SARS-CoV-2 positifs VS. négatifs
- Peu de changement au niveau des résultats en

Table 1. Patient Characteristics and Sites of Specimen Collection, by SARS-CoV-2 and Non-SARS-CoV-2 Pathogen Status

Characteristic	SARS-CoV-2 status, No. (%)			
	Negative (n = 1101)		Positive (n = 116)	
	Positive for other respiratory pathogen	Negative for other respiratory pathogen	Positive for other respiratory pathogen	Negative for other respiratory pathogen
No. of samples	294	807	24	92
No. of patients ^a	292	800	23	92
Age, mean (range), y ^b	48.8 (7-82)	43.8 (1-100)	50.8 (9-88)	43.3 (1-98)
Female, No./total (%) ^b	161/292 (55.1)	443/800 (55.4)	12/23 (52.2)	52/92 (56.5)
Site of specimen collection, No./total (%) ^c				
Outpatient clinic	115/294 (39.1)	347/807 (43.0)	11/24 (45.8)	39/92 (42.4)
Emergency department				
Discharged	122/294 (41.5)	301/807 (37.3)	12/24 (50.0)	38/92 (41.3)
Admitted ^d	28/294 (9.5)	109/807 (13.5)	1/24 (4.2)	15/92 (16.3)
Inpatient	29/294 (9.9)	50/807 (6.2)	0/24	0/92

Abbreviation: SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

^a Row sum (1207) is greater than the total number of unique patients (1206) because 1 patient was tested twice, 11 days apart, with different results for non-SARS-CoV-2 pathogens, and so appears in the first 2 columns.

^b Mean age and proportion female are calculated with respect to unique patients.

^c Proportions of samples collected at different sites are calculated with respect to numbers of samples.

^d Denotes patients tested in the emergency department and admitted to an inpatient ward from the emergency department.

Table 2. Proportions of Specimens Positive for Non-SARS-CoV-2 Respiratory Pathogens and Mean Patient Ages for Each Subgroup, by SARS-CoV-2 Result^{a,b}

Pathogen	SARS-CoV-2 status			
	Negative (n = 1101)		Positive (n = 116)	
	Proportion positive for other respiratory pathogen, No. (%) ^b	Mean age of positive patients, y	Proportion positive for other respiratory pathogen, No. (%) ^b	Mean age of positive patients, y
Influenza				
A	29/1101 (2.6)	45.9	1/116 (0.9)	74.0
B	8/1101 (0.7)	21.6	0/116 (0)	
RSV	32/1101 (2.9)	26.0	6/116 (5.2)	52.3
Parainfluenza				
1	1/1101 (0.1)	71.0	1/116 (0.9)	43.0
2	0/1101 (0)		0/116 (0)	
3	2/1101 (0.2)	40.0	1/116 (0.9)	45.0
4	5/1101 (0.5)	26.6	1/116 (0.9)	36.0
Metapneumovirus	47/1101 (4.3)	41.1	2/116 (1.7)	67.0
Rhinovirus/enterovirus	133/1101 (12.1)	32.6	8/116 (6.9)	42.1
Adenovirus	10/1101 (0.9)	14.1	0/116 (0)	
Other Coronaviridae	39/1101 (3.5)	42.2	5/116 (4.3)	40.8
Chlamydia pneumoniae	0/1060 (0)		0/116 (0)	
Mycoplasma pneumoniae	6/1101 (0.5)	14.8	0/116 (0)	

Abbreviations: RSV, respiratory syncytial virus; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

^a Positive results for non-SARS-CoV-2 pathogens may in some cases represent the detection of residual virus in resolved cases, rather than clinical co-infection as such.

^b None of the differences in proportions positive between patients positive and negative for SARS-CoV-2 are statistically significant at $P < .05$ (χ^2 tests with continuity correction).

Limites:

Petit échantillon dans 1 seule région des États-Unis

CE QU'IL FAUT RETENIR!

Il y a plus de co-infections que préalablement rapporté (**plus de 20%**); la présence d'un autre virus ne peut donc PAS rassurer sur l'absence du SARS-CoV-2!