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LETTERS

Prevention of the spread of SARS COV-2 by Rapid Antigenic Tests on the passengers entering an Italian seaport

Prevenzione della diffusione del SARS COV-2 attraverso i test antigenici rapidi sui passeggeri sbarcati in un porto italiano

Key words: Covid-19 mortality, USA, Italy

Abstract

The differences of the epidemiology (incidence, case-to-death rate, mortality, etc) of COVID-19 between USA and Italy are analyzed taking into account the social, economic and sanitary characteristics of the two countries, both severely hit be the pandemic; and the causes of the so many different behaviors of the disease in each of them are discussed and explained.

Sir:

We wish to describe the screening activity for SARS-CoV-2 carried out at a major seaport area under the control of a large Roman Health Authority by means of rapid antigen and molecular tests. We carried out a retrospective observational study involving collection of sociodemographic and clinical data from all the people arriving from areas at high risk of infection by SARS-CoV-2. These subjects were also screened by means of the rapid antigenic test and, if found positive, they were subsequently admitted to a molecular nasopharyngeal swab to confirm the positivity. The screening took place at the seaport area drive-in facility, between August 21 and September 27- 2020, and the results were analyzed by a multidisciplinary team.

The data were stored, using alphanumeric codes to guarantee anonymity, in the archives of the Department of Prevention of the Local Health Authority.

Continuous variables were reported as means and standard deviations, and categorical variables were described as frequencies and percentages. Incidence was computed dividing the number of new cases by the population at risk.

The multidisciplinary team dedicated to the study performed the screening activity for a total period of 38 days, from 5 p.m. until the end of the landings about 5 a.m.

The whole process encompassed an average of 870 individual landings per day. The number of screened people by September 27th, was 38,282 (Table 1).

After the rapid antigenic tests, the "positivity" incidence rate for SARS-CoV-2 infection was 0.6% (227/38,282). Subsequent molecular nasopharyngeal swab tests (qRT-PCR) were applied on these 227 "positive" subjects, and 212 (93.4%) were confirmed positive. The incidence rate of confirmed positives is then 0.55%, with a 6.6% rate (15/227) of false positives.

Subjects screened by rapid antigen test and found positive, after thirty minutes were admitted to a molecular nasopharyngeal swab (qRT-PCR) to confirm the positivity.

Waiting for the results, subjects' data were communicated to the Hygiene and Public Health Service, to implement the preventive measures of infectious isolation and contact tracing.

If the molecular nasopharyngeal swab confirmed the positivity, there were two possibilities of intervention, depending whether the subjects were o weren't living in the same area of the Local Health Authority. In the first case,

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Table 1 - Sociodemographic characteristics of those involved in the screening (38,282 overall).

Descriptive	N° (%) or M (± SD)
Age (in years)	50.17 (9.05)
Gender	
Male	19,791 (51.70)
Female	18,491 (48.30)
Family condition	
Living with others	28,098 (73.40)
Living alone	10,184 (27.60)

Note. M= mean; SD: Standard Deviation

the Local Health Authority Prevention Department informed the subjects by phone call, and the contact tracing was performed: the subjects were isolated at home to prevent the contagion of the infection. The data of the positive subjects were also communicated to their general practitioners, to manage them over time, until the negativization to the SARS-CoV-2 infection.

In the other case, the Local Health Authority Prevention Department notified to the subject and to his Health Authority the positive molecular swab result, to proceed with the isolation and public health measures.

As underlined by the World Health Organization and by the most recent scientific literature, screening of all suspected cases at risk of, or suspected of infection, is essential for pandemic control (1). In this letter, the rapid antigen test allowed the screening of a great number of people returning from areas deemed at high risk. This was particularly true thanks to the complex organizational activity required to provide the necessary turnover of the human resources, considering also the schedules of ships arriving h-24. The results of this public health intervention underline the importance of organizing large-scale screening for the COVID-19 control, so that subsequent quarantine of those with active infection could be planned to interrupt the spread.

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