

RESEARCH LETTER

Hepatitis C screening during SARS-CoV-2 testing or vaccination. Experience in an area of southern Italy in the province of Salerno

To the editor,

INTRODUCTION

Nowadays hepatitis C can be cured in nearly all affected people by extremely effective and safe therapies, therefore the current challenges are case finding and access to treatment. The latest estimates by the WHO report 58 million hepatitis C cases around the world and about 1.5 million new infections per year.¹ Some experts believe that the Global Health Sector Strategy goal of eliminating viral hepatitis 'as a major public health threat' by 2030¹ is somewhat optimistic in relation to the current global situation.² The SARS-CoV-2 pandemic has hampered the hepatitis C testing and treatment,³ and it is estimated that it could be a major obstacle to hepatitis C elimination.^{3,4} Among the efforts to counter this scenario, it was proposed to exploit the current pandemic to enhance hepatitis C screening.⁵ The first experiences of combined HCV/SARS-CoV-2 testing have already been carried out,^{6,7} while although it was proposed,⁸ there are still no data on the combination of screening for hepatitis C and SARS-CoV-2 vaccination. For these reasons, we started a screening program for hepatitis C simultaneously with the SARS-CoV-2 testing or vaccination. This project took place in an urban area in the province of Salerno (Campania region).

METHODS

Screening for SARS-CoV-2 infection was performed at the USCA (*Unità Speciali di Continuità Assistenziale*) of Baronissi using nasopharyngeal swab, NPS (Greiner bio-one), to search for the viral RNA, while the SARS-CoV-2 vaccination (using Pfizer-BioNTech, Moderna, or Oxford-AstraZeneca vaccine) took place at the Fisciano vaccination centre. The screening for hepatitis C, which was proposed to all people over the age of 17 after obtaining written informed consent, was carried out at both sites using the Anti-HCV TEST WB/S/P (TürkLab) for the identification of

anti-HCV antibodies. In the time period 1 May–20 July 2021, 3735 people underwent SARS-CoV-2 testing, 5095 were vaccinated against SARS-CoV-2, and 3000 were screened for HCV. Statistical analyses were conducted using GraphPad Prism 9.2.0. The study was approved by our local Ethics Committee (Comitato etico Campania Sud).

RESULTS

Among the 3735 people who carried out the NPS, 1951 (1232 different people) met the criteria for hepatitis C screening. Of these, 373/1232 (30.3%; 95% CI, 27.8%–32.9%) agreed to carry out the HCV-Ab test; 221/3735 (5.9%; 95% CI, 5.2%–6.7%) NPSs tested positive, while all HCV-Ab tests resulted negative. Among the 5095 people who underwent COVID-19 vaccination, 1952 (38.3%; 95% CI, 37.0%–39.7%) performed the screening for hepatitis C, and five of these (0.3%; 95% CI 0.1%–0.6%) were HCV-Ab positive. Furthermore, 675 HCV-Ab tests were performed for people who accompanied relatives to have a NPS; among the latter, two subjects (0.3%) resulted positive. The total prevalence of HCV-Ab positivity among people who agreed to take part in this project was therefore 0.2%. Regarding the seven anti-HCV-Ab positive people: the average age was 52.7 years; positive cases were found in the age classes 31–40 (3), 41–50 (1), 51–60 (1), 71–80 (1), >80 (1); four were women and three were men; 2/7 were of foreign nationality; 5/7 reported awareness of their status. Among these latter subjects, four had previous treatment with DAAs with a SVR rate of 100%, while one of them did not undergo any therapy. The other two people who tested positive for HCV-Ab were not aware of their positivity and they did not undergo any therapy. These last three subjects were referred to our Unit, and after checking the HCV RNA status and genotype [3a (2), 1a (1)] they began antiviral therapy with DAAs. The prevalence of active HCV infection found in this project was therefore 0.1%. The total cost of performing these adjunctive HCV testing was of 11100 euros overall or 3.7 euros per screened patient. [Table 1](#) summarizes the results of this project.

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TABLE 1 Characteristics of people screened for hepatitis C during SARS-CoV-2 testing or vaccination

	Overall HCV testing (3000)	HCV/SARS-CoV-2 testing = 373 (12.4% of the total)	HCV testing/SARS-CoV-2 vaccination = 1952 (65.1% of the total)	HCV testing only = 675 (22.5% of the total)
Average age	43.4 years	46.2 years	41.6 years	47 years
Age classes				
≤20	80 (2.7%)	20 (5.4%)	47 (2.4%)	13 (1.9%)
21–30	529 (17.6%)	38 (10.2%)	440 (22.5%)	51 (7.6%)
31–40	735 (24.5%)	64 (17.2%)	502 (25.7%)	169 (25.0%)
41–50	742 (24.7%)	117 (31.4%)	418 (21.4%)	207 (30.7%)
51–60	453 (15.1%)	64 (17.2%)	277 (14.2%)	112 (16.6%)
61–70	324 (10.8%)	46 (12.3%)	204 (10.5%)	74 (11.0%)
71–80	114 (3.8%)	21 (5.6%)	51 (2.6%)	42 (6.2%)
>80	23 (0.8%)	3 (0.8%)	13 (0.7%)	7 (1.0%)
Sex (M/F)	1369/1631	177/196	877/1075	315/360
Not Italian	46 (1.5%)	7 (1.9%)	29 (1.5%)	10 (1.5%)
HCV-Ab test positive	7 (0.2%)	0	5	2
Awareness of HCV-Ab status	5/7 (71.4%)	–	5	0
Previous treatment	4/7 (57.1%)	–	4	0
HCV-RNA positive	3/7 (42.9%)	–	1	2

DISCUSSION AND CONCLUSIONS

This project confirms that screening for hepatitis C is possible during testing for SARS-CoV-2, and demonstrates that COVID-19 vaccination could be an opportunity for HCV-Ab testing. However, we registered a high refusal rate for hepatitis C screening during both testing or vaccination for SARS-CoV-2. By administering the informed consent, all the subjects were briefly informed about HCV infection and its therapeutic options and also asked to provide the explanation for refusal. The refusal rate was significantly lower ($p < .0001$, chi-square test) in people who received a COVID-19 vaccine than in those who were tested for SARS-CoV-2 RNA. The reasons for HCV-Ab test refusal were lack of knowledge of the disease (55%), fear of positive results (40%), and distrust of the health system (5%). Another aspect to consider is that the prevalence of HCV-Ab positivity was found to be lower compared to that reported in the Italian general population (~2%, with a higher prevalence in southern regions compared to northern ones based on historical data).^{7,9} This could be partly explained by data reporting that in Italy the prevalence of HCV infection increases with age (a peak of 7% of HCV-Ab positive people was documented in the 1935–1944 age group),¹⁰ and as the elders represented a minority of the people involved in our project, probably because they had already been vaccinated for SARS-CoV-2 at the time this project took place. On the other hand, we cannot exclude that those results may be also partially influenced by a 'selection bias', being those with mistrust in the health system 'self-selecting' themselves out of the screening by not

performing it. These aspects lead us to question the cost/benefit ratio of hepatitis C screening during current SARS-CoV-2 testing or vaccination programs.

KEYWORDS

combined screening, COVID-19 vaccination, hepatitis C, SARS-CoV-2

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CONFLICT OF INTEREST

None.

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