

# Blood donation from HCV SVR patients?

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## **To what extent has collection of donated blood been jeopardized during the COVID-19 pandemic?**

All blood transfusion establishments worldwide are encountering some problems. At the start of the pandemic, SARS-CoV-2 was a new virus, and its potential for transfusion transmission by asymptomatic viraemic donors, was uncertain. We have now learned that - like other respiratory viruses - SARS-CoV-2 is not a big threat to blood safety, as donor-derived COVID-19 in transfused patients has not been reported to date. Anyway, national blood systems have developed guidance on the selection of donors, with precautionary deferral periods following infection and symptom reporting following donation. In addition, blood donors were understandably reluctant to donate during lockdowns, in order to avoid their own exposure. As a consequence, blood collection fell by up to 30% almost everywhere <sup>(1)</sup>. Initially, this trend was compensated by a reduction in demand for transfusions because of a decrease in elective surgical interventions and medical treatments. In addition, most patients with COVID-19 had no high transfusion requirements. In this regard, we showed that during the first wave of the Italian pandemic 39% of COVID-19 patients at our hospital needed red cell transfusions during the first two weeks of disease, and very few patients received platelets or plasma <sup>(2)</sup>. However, the standard of care of hospitalized COVID-19 patients now includes anticoagulation, which may increase transfusion requirements. In addition, there is a gradual resumption of all clinical activities, and therefore the loss of blood donations is of concern. Thus, even in high-income countries where self-sufficiency of blood donations has been achieved, there is a need for increasing the number of donors.

## **In the field of organ transplantation, persons cured from HCV are now allowed to donate tissue and organs, because the risk of transmission to the recipient is nearly zero. Would blood donations from SVR patients be as safe as donated solid organs?**

As we have recently discussed <sup>(3)</sup>, whether or not individuals who have been cured of hepatitis C should be allowed to donate blood is a topical issue. As mentioned above, there is a need for increasing blood donation. In addition, following the implementation of national programs for HCV elimination, the number of individuals that have been definitively cured from HCV infection is increasing worldwide. It is very likely that some of them would feel very motivated to donate blood, living the experience of blood donation as a way to remove the stigma of HCV infection. <sup>(4)</sup> Should we allow them to donate blood? Of course, we have to be cautious. Safety has not been formally proven in clinical trials, and although we now have very effective screening tests to prevent viral transmission, we should bear in mind that the risk will never be zero. For example, some studies in the field of organ transplantation have shown that the infectious risk of anti HCV positive, non viremic donors is still higher risk than that of standard donors, because some of them have maintained risk factors for HCV infection. <sup>(5)</sup> However, this does not necessarily extend to the field of blood transfusion, because blood donors, differently from organ donors, can be interviewed about sexual and parenteral risk before being admitted to donation. Based on current evidence <sup>(6)</sup>, it is reasonable to assume that once risk factors for reinfection have been excluded and high-sensitive molecular screening tests are in use, the infectious risk of anti-HCV positive donors who are longer viremic would not be higher than that of standard donors.

## **How feasible is donation from SVR individuals in real life? Should this be a routine or on demand practice only?**

Expanding the blood donor pool has the highest priority in low to medium income settings, where donations are not enough to meet the clinical demand. Unfortunately, however, a revision of the donation policy for individuals who have been cured of HCV infection would theoretically be feasible only in high income countries, where new effective treatments have already started and screening of blood donations with highly sensitive molecular assays has been introduced. <sup>(3)</sup> In these countries transfusion medicine is still largely based on the precautionary principle, which means that any change of deferral policies is very difficult, even when there is evidence supporting their modification. <sup>(7)</sup> In addition, using a risk-based approach, the expected benefit in terms of increase of blood collection would not be enough to counterbalance even the smallest harm, without mentioning the increasing costs for validating each anti-HCV positive, non-viremic blood donation. We have recently estimated that even in Italy—a country with a relatively high prevalence of anti-HCV—a revision of deferral rules would only minimally boost blood collection (no more than 0.1%). <sup>(3)</sup> Thus in my own view there is no room for substantial changes of the donation policy for former hepatitis C patients, at least in the near future. We can, however, imagine a few exceptions, for example in donors with rare blood groups, who provide potentially lifesaving treatments for some alloimmunized patients.

## **However, in many countries the ban on blood donations still involves partners of individuals who have achieved a sustained virological response after HCV treatment. Is this justifiable?**

I think that this ban to partners and family members of former HCV carriers should be removed, especially in countries where highly effective blood screening tests are already in place. While it is true that there is no right to donate blood, donor deferral criteria should have a sound basis of evidence <sup>(8)</sup>, which is lacking in this case. In addition, it must be taken into consideration that transfusion medicine is now shifting from general deferral rules based on categories or populations—that may be perceived as discriminatory—to an individual risk assessment. <sup>(8)</sup> This means that a decision on whether or not to allow partners or family members of anti-HCV positive patients to donate should be taken individually, after the assessment of risk factors for transfusion transmittable infections and an evaluation of the virological status of the contact. Indeed, current exclusion policies could harm HCV cured patients and their families, by alighting fears of persisting disease and risk of transmission, without contributing to transfusion safety. <sup>(3)</sup>

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