Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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indexes such as blood oxygen saturation improving comprehensively. During the COVID-19 outbreak, China established dedicated expert task force both on the national and local levels respectively to analyze and improve the production and treatment of plasma therapy. There have been mature conditions for scale application of the therapy in China. Clinical practice shows the convalescent plasma should be early infused to ensure a better therapeutic effect. The treatment effect of recovered plasma in the treatment of critical. There are some experiences worthy of our share in convalescent plasma collection and infusion. The peak value of IgG antibody produced in COVID-19 patients conforms to the general rule. COVID-19 patients with cytokine storm syndrome (CSS) could not donate plasma after recovery. Plasma donation won’t hurt the donor once he or she has been discharged from the hospital for 14 days. A convalescent patient had better donate plasma only once. Besides normal components and specific IgG antibodies, convalescent plasma contain no other pathogenic substances and components. Convalescent plasma was prepared into freeze-dried or concentrated blood products, which is convenient for management and application, especially responding to emergencies. The curative effect of convalescent plasma is closely related to the quality, dose, antibody titer and infusion time of the plasma. The recovery plasma dose was determined according to the patient’s viral load. In order to reduce the adverse reaction of transfusion and improve the clinical curative effect, the patients should be given promethazine hydrochloride or dexamethasone before convalescent plasma infusion. When using recovery plasma to treat infected patients, we should adhere to the individualized treatment and avoid the adverse consequences caused by following the same pattern.

Transfusion therapy is an ancient and novel technique. Ozone autotransfusion therapy has been used in antiviral therapy for more than 20 years. Madrid Declaration on Ozone Therapy (2nd Edition.), officially issued by International Scientific Committee of Ozone Therapy in 2015, gives a detailed description of antiviral ozone autotransfusion therapy [5]. Combined with COVID-19 pneumonia clinical characteristics, ozone autotransfusion therapy could increase blood oxygen saturation, improve tissue hypoxia and reduce incidence of multiple organ failure caused by CSS. Scientists are studying the feasibility of ozone autotransfusion therapy in COVID-19 pneumonia patients in China. According to incomplete statistics, there are no less than 1000 hospitals in China that have carried out this technology, the operation is simple and easy to master, and no serious adverse events related to this technology have been found. We successfully applied of the technique to therapy a COVID-19 patient in Hubei province, China.

Authors’ contributions

HKM gathered information and drafted the manuscript. ZM and ZZJ co-designed the study and helped writing the manuscript. All authors read and approved the final manuscript.

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A quick “Can I donate blood” self-assessment tool amid the COVID-19 outbreak

Sir,

A novel coronavirus (nCoV) suddenly got into our site from Wuhan in December 2019 [1]. This nCoV was subsequently renamed Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), and besides the disease it causes as Coronavirus Disease-2019 (COVID-19). The outbreak of COVID-19 has stomped the health care system in almost all the nations of the world [2]. Blood Transfusion Services (BTS) at each hospital, hold a primary position and facilitate the smooth functioning of all elective and urgent surgical interventions including various traumas, emergency, obstetric and cancer care throughout a duration of 24×7. One of the major challenges ahead of us is to maintain high spirits and persistent enthusiasm among volunteer donors to continue donating their whole blood [WB], even during this pandemic. We believe that there might be a lot of paranoia, uncertainty and false assumptions in the minds of donors about blood donation amid this pandemic. In addition, due to the government’s interventions, such as mass lockdown and containment measures for social gatherings, in the wake of this COVID-19 outbreak, the arrangement of voluntary blood donation drives has been debarred [3]. Likewise, the general public has been reluctant to come to hospital-based blood centers to donate blood. This has led to a significant reduction in
the number of blood collected globally. By calling for efforts such as public education and clarification of frequently asked questions, we believe that blood donation can be encouraged. In reality, the safety of both donors and employees should remain a priority of any BTS during this time. This implies frequent and consistent cleaning of donor stations, including surfaces with potential contamination and wearing protective face masks by donors as well as the BTS personnel. In addition, employees must be properly equipped to conform to all the requisite standards, including the donning of the personal protective equipment (PPE) and the management of biological waste produced.

Furthermore, COVID-19 can exhibit in a varied manner, starting from an asymptomatic carrier state to full-blown acute respiratory illness. In 2003, the world health organization acknowledged there were no known cases of SARS-CoV due to transfusion of blood products. However, at this juncture, the transfusion related transmission of nCoV, although remote, remains a reasonable possibility. In addition, with more asymptomatic carriers of the disease, blood safety merits consideration. Current predictions are based primarily on the new guidelines released by AABB, and more than ever, a vigilant approach, including thorough donor surveillance, is needed [4]. Once presenting with flu-like illnesses, the current eligibility rules laid by AABB and FDA prohibit these individuals from donating their blood. Moreover, the concerns are more legitimate when it involves adults who are asymptomatic and come forward to the blood centers as “apparently” healthy blood donors. They may pose a serious health risk to the blood community. These “asymptomatic” rather “innocent blood donors” (IBDs) may not even be fully aware of their viral status at the time of WB donation. We as a blood center catering to a 1200-bed tertiary care teaching hospital in the Dehradun district of Uttarakhand, North India, wanted to deal with this issue. Therefore, we created a “Can I Donate?”, a self-estimation tool (SAT) amid this pandemic to facilitate an estimation of the magnitude of the current pandemic, its implications for blood safety and to encourage self-deferral among these IBDs if they found themselves unsuitable for WB donation (Table 1). In addition, we also handed them the published SAT material to carry the same and help propagate the word amongst their peers and other potential IBDs. We believe that speedy sharing of any scientific information is an efficient tool to reduce public panic over any pandemic, including COVID-19, especially among those willing to donate their blood on a voluntary basis. As suggested by Raturi et al. [5], in addition to the otherwise existing donor screening questionnaire, the SAT content was designed and distributed by us. The awareness of COVID-19 is growing on a daily basis. Nevertheless, with these criteria in place, we wish to encourage our blood donors to self-evaluate the seriousness of the present pandemic and its implications for blood safety. The existing blood donor screening protocol [6] together with SAT and a standard mini-physical examination should be able to deter either those with active respiratory symptoms or even the so-called “asymptomatic” IBDs from donating blood.

| S. No. | Category of symptoms | Suggested deferral period |
|--------|----------------------|--------------------------|
| 1      | Asymptomatic         | Accept their donation    |
|        | Feeling well and     |                          |
|        | Meet the general     |                          |
|        | eligibility          |                          |
|        | conditions for       |                          |
|        | donation              |                          |
|        | If not a close       |                          |
|        | contact with someone |                          |
|        | diagnosed with or    |                          |
|        | suspected of         |                          |
|        | having COVID-19      |                          |
| 2      | Asymptomatic         | Wait for 14 days         |
|        | If close contact     |                          |
|        | with someone         |                          |
|        | diagnosed with or    |                          |
|        | suspected of         |                          |
|        | having COVID-19      |                          |
| 3      | Asymptomatic         | Wait for 28 days         |
|        | Travelled outside    |                          |
|        | the country and      |                          |
|        | or recently returned |                          |
|        | from “government    |                          |
|        | identified COVID-19  |                          |
|        | “hotspots” within    |                          |
|        | the country          |                          |
| 4      | Symptomatic          | Wait for 14 days         |
|        | A mild bout of       |                          |
|        | flu-like illness     |                          |
|        | Associated symptoms  |                          |
|        | such as sore throat  |                          |
|        | or tickly cough      |                          |
|        | History of antibiotics |                      |
|        | or anti-pyretic intake |                     |
| 5      | Symptomatic          | Wait for 28 days         |
|        | Body temperature     |                          |
|        | more than or         |                          |
|        | equal to 38 celsius  |                          |
|        | Moderate to severe   |                          |
|        | symptoms as          |                          |
|        | influenza-like or    |                          |
|        | other respiratory    |                          |
|        | infections            |                          |
|        | Diagnosed with or    |                          |
|        | suspected of         |                          |
|        | having COVID-19 with  |                          |
|        | positive laboratory  |                          |
|        | report by PCR method |                          |

SAT: self-assessment tool; COVID-19: coronavirus disease – 2019; PCR: polymerase chain reaction.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional ethics committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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The author declares that he has no competing interest.

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