



Donor's Perception Regarding Plasma Donation in Pakistan

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Received: 10-07-2020

Accepted: 7-08-2020

Published: 10-08-2020

ABSTRACT

Covid19 is rightly ranked as first international pandemic that within a short span of time covered the globe. There was no specific medicine to fight Covid-19 in early days (Rubin et al., 2020). But soon it was discovered that plasma of recovered covid-19 patient could be a hope for the newly affected patient. Fortunately, in Pakistan trails of convalescent plasma therapy proved much better results. But most of recovered people have fears and myths about plasma donation. This study aimed to motivate the recovered covid-19 patients to donate plasma generously through removal of apprehensions. plasma. In this cross-sectional study, self-generated questionnaire having answer (Yes/No) were designed and got it filled by 112 covid-19 recovered patients on Google forms and tried to find out the views about plasma therapy. Data is analyzed through SPSS version 26. About 55.5% people think that plasma donation is equal to blood donation, 50.9% think that plasma donation causes adverse effects on their health after donation. Amongst the participants in the sample, 73.2% had never donated blood even for a single time in their lives. The study enabled to know more precisely that why recovered patients avoid to help others to whom they were a ray of hope. The major deadly concern which kept the healed patient to abstain from plasma donation was further deterioration of health. While addressing the specific hinderance creating misconceptions the majority of recovered patients were ready to donate. A strong need is felt to encourage the mobs to donate blood in general and covid-19 recovered patient should donate their plasma for saving lives through proper awareness sessions by using social media, print media as well as electronic media.

KEYWORDS

Perception, Blood Donation, Plasma Donation, covid-19, donor, therapy, motivation.

INTRODUCTION

Amidst the pandemic of 2020, of novel Corona virus, whole medical world is trying to find the best regime or therapeutically ways to deal with it (Mahindra et al., 2020). Health care workers are focusing on every possible way to treat it either by invasive or non-invasive method (Guideline, B. T. S., 2002). One of the therapies that just has gained all the praises is Plasma Therapy (Liu et al., 2020). As it is reportedly stating that a recovered covid'19 patient develops antibody titer, these reactive antibodies in human body provide immunity for ongoing attack of disease (McIntosh, Hirsch & Bloom, 2020). If the same plasma of any recovered patient is transfused into any suffering patient it can do miracle by providing immunity.

The act of donating plasma is critical and vital for lives saving approach of medicine during this outbreak of corona pandemic (Kumar, Sharma & Priya, 2020). Necessarily it is the need of to increase the consciousness of general public about the noble cause of donating blood, also aware them about basic eligibility criteria of donation (Copeman, 2009). Many elements are responsible for a person to become a plasma donor, it includes self-awareness and fear, trust on health care workers, satisfaction with their own recovery and their own body strength (Leary., 2007). Mass awareness is a major factor which help in improving community perception regarding to plasma donation, it is likely to increase particularly when anyone is having a personal experience; when a relative or friend needs plasma transfusion for treatment (Bilal et al., 2015), speaks that 83.7% of donors are family members, and the present pandemic has no exception as well. Personal awareness regarding to plasma donation perception is dependent on certain factors, which needs to be addressed deeply as a proper subject of public awareness collectively by health care workers and governmental authorities (Erickson, Chris, Nada & Al-Timimi, 2001). This piece of literature revolves around the possible barriers in healthcare setup that are hurdles in plasma donation, including lack of awareness in commoners, lack of patience in healthcare workers, communication gap between among donor and receiver.

Convalescent plasma therapy has gained a huge recognition in last two decades (Casadevall, & Scharff., 1995). Particularly with the outbreak of SARS, MERS and EBOLA, it is becoming a magical medical treatment to save the patients (Del Rio, & Guarner., 2015). With the recent ongoing pandemic of Covid-19, even third world countries like Pakistan has also started to use this option to reduce the mortality and morbidity level (Hakeem, & Sheikh., 2020). Plasma donated by any recovered patient of Covid-19 can be vaccine to the new victim (Banwait, Salabei, Fishman, & Iyer., 2020). The number of COVID-19 victims are increasing regularly worldwide. Plasma therapy is not new in town. Previously plasma transfusion is doing wonders. In various viral diseases and even in heredity diseases including pneumonia related to

SARS-CoV, Guillain-Barré *syndrome* (GBS), Myasthenia gravis, multiple myeloma, states that mortality rate can be reduced by using convalescent plasma (Berencsi & Szomor., 2012).

Plasma transfusion is a technique use in hematology practice (Hicks et al., 2013). This transfusion technique revolves around the basic principle of physics, which works by the application of centrifugal force to remove all types of blood cells from whole blood, which leave purified plasma as a result (Hou et al., 2011). After the separation of blood cells from the whole blood collected from a patient, purified blood plasma is analyzed for antibody titer, total cholesterol, glucose, lactate, electrolyte concentration, etc. (Hasanzadeh & Shadjou., 2016). Then upon meeting the criteria for transfusion it is given to the recipient. Plasma infusion therapy is one of the procedures that help health care workers per year to save hundreds of lives (WHO 2015). Blood infusion helps in treating critically ill patients. Similarly, blood components also provide assistance in treating patients: known cases of life-threatening ailments, bettering the life quality of terminally ill patients: providing assistance in composite procedures of medicine and surgery (Jagodic & Podbregar., 2006). Plasma infusion therapy forms a basic helpful lifesaving role in many human inflicted disasters, burns, shocks even in childcare as well as in maternal wellbeing. With the passage of time there is ever increasing demand of blood and its components resources to be used for many clinical treatments (Shander et al., 2012).

LITERATURE REVIEW

People are afraid of donating, which is expressed in form of vasovagal rush, fainting, phobia of hospital setting (Antony & Watling, 2006), and in the subjected people their increased fear of reinfection of covid19 (Marahatta, Paudel & Aryal, 2020). People think plasma donation is same as that of blood donation, therefore during plasma donation they face emotional stress, which becomes a cause of fainting; syncope, hypotension, lightheadedness, vertigo and dizziness (Vossbeck-Elsebusch & Gerlach, 2012). The willingness to donate plasma vary from person to person. Some already know about plasma importance, while some are still bling about its importance. Following study is closely related to the perception how a person reacts to the idea of donating blood. People participating in plasma donation are asked about their previous experience of donating blood (Sojka & Sojka, 2008). To a shocking extent the ratio of donating blood donors was striking low particularly in females there is no trend of donating (Greinacher, Fendrich & Hoffmann, 2010).

This study is designed to identify the donor's perception regarding plasma donation to covid-19 critically ill patients. There is no significant work done on donation perception among covid19 recovered patients, however authors try to read different articles from different resources related to plasma donation, but they

all are trying to prove effective treatment of Covid-19 (Liu et al., 2020). Yet this is new topic related to perceptions. As majority of peoples think plasma donation is equal to blood donation so their major concerns are same that are about blood donation (Randolph, & Barreiro, 2020)

Self-made questionnaire was used having options of YES/NO due to unavailability of literature on this particular topic and answers of 112 participants were collected online via google forms. In our study, we found that most of the participants were in age group of 22-45 years (71%) followed by young men (54%). It is observed that higher the income, Percentage of non-donors was high i.e. 48%, it means it is the poor unemployed person and servicing people are the backbone of the blood donation programs and plasma donation as well, The results of our study states that 55.4% of the participants responded: plasma donation is same as blood donation.

METHODOLOGY

Cross sectional study pattern is designed to conduct this research. Self-made questionnaire is used, due to unavailability of literature on this particular topic plasma donation. A short half structured (focused) questionnaire was designed with 'structured' questions answer categories (Yes/No) and open questions to which answers can be written down is used. Sample size of 112 patients, recovered from covid'19 is used. Data is collected via google forms, questionnaire is developed bilingually, including mother language of Urdu and internationally accepted English. This web-based questionnaire is completely voluntary and non-commercial (Huang et al., 2020). Public in our study consisted of almost every field including doctor, students, businessman, houseworkers and housewives, from barely secondary pass to highly educated. People from all over Punjab took part in it. Data was analyzed using SPSS version 26.

Table 3.1 *Gender*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Male	76	67.9	67.9	67.9
	Female	36	32.1	32.1	100.0
Total		112	100.0	100.0	

Table 3.2 *Age*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	15-25	48	42.9	42.9	42.9
	26-35	34	30.4	30.4	73.2
	36-45	9	8.0	8.0	81.3

>45	21	18.8	18.8	100.0
Total	112	100.0	100.0	

Table 3.3 Profession

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Healthcare Workers	29	25.9	25.9	25.9
	Employee	21	18.8	18.8	44.6
	Businessman	17	15.2	15.2	59.8
	Others	45	40.2	40.2	100.0
	Total	112	100.0	100.0	

Table 3.4 Socio Economic Class

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Healthcare Workers	29	25.9	25.9	25.9
	Employee	21	18.8	18.8	44.6
	Businessman	17	15.2	15.2	59.8
	Others	45	40.2	40.2	100.0
	Total	112	100.0	100.0	

Table 3.5 Do you know about plasma donation.

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	100	89.3	89.3	89.3
	No	12	10.7	10.7	100.0
	Total	112	100.0	100.0	

Table 3.6 Is blood donation same as plasma donation

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	62	55.4	55.4	55.4
	No	50	44.6	44.6	100.0
	Total	112	100.0	100.0	

Table 3.7 *Is plasma donation safe for life*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	103	92.0	92.0	92.0
	No	9	8.0	8.0	100.0
Total		112	100.0	100.0	

Table 3.8 *Will you donate plasma*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	77	68.8	68.8	68.8
	No	35	31.3	31.3	100.0
Total		112	100.0	100.0	

Table 3.9 *Will you donate plasma without any pressure*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	77	68.8	68.8	68.8
	No	35	31.3	31.3	100.0
Total		112	100.0	100.0	

Table 3.10 *Will you motivate others to donate plasma*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	92	82.1	82.1	82.1
	No	20	17.9	17.9	100.0
Total		112	100.0	100.0	

Table 3.11 *Is the selling of plasma justified*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	23	20.5	20.5	20.5
	No	89	79.5	79.5	100.0
Total		112	100.0	100.0	

Table 3.12 *Plasma donation is helpful for fight Covid-19 in Pakistan*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	98	87.5	87.5	87.5

No	14	12.5	12.5	100.0
Total	112	100.0	100.0	

Table 3.13 *Is plasma helpful to fight other diseases*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	70	62.5	62.5	62.5
	No	42	37.5	37.5	100.0
Total		112	100.0	100.0	

Table 3.14 *Does donor face consequences after donation*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	57	50.9	50.9	50.9
	No	55	49.1	49.1	100.0
Total		112	100.0	100.0	

Table 3.15 *Have you ever donated blood*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	30	26.8	26.8	26.8
	No	82	73.2	73.2	100.0
Total		112	100.0	100.0	

Table 3.16 *Already donated plasma after recovery from Covid-19*

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	17	15.2	15.2	15.2
	No	95	84.8	84.8	100.0
Total		112	100.0	100.0	

RESULTS AND DISCUSSION

Plasmapheresis is doing wonders, plasma therapy has proven results in platelet disorders (Mishra, Woodall & Vieira, 2009), von Willebrand factor (vWF) deficiency disorder, viral herpes, Ebola, SARS MERS, and even in viral pneumonia, hoping to see same miracle results in the pandemic of covid19. For this therapy to work, health care authorities' need to approach donors that have already recovered from covid19. But

due to demise that prevails in a person due to disease made them morally afraid of donating, fear in them of reinfection, coming in contact with the situation again where death is just at the door is a dare demand from them (Kübler-Ross, 2011). During filling of questionnaire people express the anxieties, panic attacks, and their nervous breakdown during their stay at hospital or self-quarantine (Pearson, 2010). These fears need to be politely addressed and make them considerate about their service that they can give to other sufferers (Hermann et al., 2019)

This aforementioned study has some limitations also that should be kept in mind. This is not representation of the whole general public of Pakistan, here we involved only a small portion of general public, who have recently recovered from covid19. Approaching the recovered covid19 patients is quite a task, due to repetitive approach to them, have made them quite agitated regarding to anything related to covid19 (Figus, 2020). At first, they are not willing to hear the authors, perhaps after grossly explaining the aim of the questionnaire, people agreed to take part in it.

Plasma donation consciousness already exist among the participants taking part in research due to their recent positive history for covid19. Risk potential of plasma therapy is somehow almost same those with blood donation (MacLennan et al., 2006). People are worried about transfusion-transmissible infection (Bhawani, Rao., & Sudhakar, 2010). Lack of awareness regarding blood donation have made many myths even about plasma donation in donors (Charbonneau, Cloutier, & Carrier, 2016). No proper regulatory body for blood donation is working throughout the country (Abolghasemi, Hosseini-Divkalayi., & Seighali, 2010). Similarly, there are no licensed blood centers in central cities (Li et al., 2020). People at periphery even not aware of the concept of blood and blood products donation.

Result after conducting aforementioned study shows the following result. For the subject study we approach to 112 people amongst them there are 76 Male (67.9%) and 36 females (32.1%). 48 (42.9%) participants are having age range from 16 to 25 years, 34 people (30.4%) are 26 to 35 years of age, 9 (8%) people have range from 36 to 45 years of age and 21 (18%) people are above than 46 years of age. 48 (42.9%) participants are having age range from 16 to 25 years, 34 people (30.4%) are 26 to 35 years of age, 9 (8%) people have range from 36 to 45 years of age and 21 (18%) people are above than 46 years of age. Socio economic classification reflects that out of 112 only 7 (6.3%) belong to lower class, Lower Middle-Class representation is 25 (22.3%), Highly affected 62 (55.4%) are belonged to Upper Middle Class and 18 (16.1%) are from the Upper Class.

And once the mainstream questions about the plasma donation are asked people responded somehow reluctantly. It is good sign that majority of the people is well aware of Plasma Donation i.e. 100 (89.3%).

Only 12 (10.7%) are not aware of plasma donation. Amongst 112 there are 62 (55.5%) of the opinion that Blood Donation is as same as Plasma Donation whereas 50(44.6%) consider it differently. Out of total sample of 112, there are 103 (92.0%) are of the view that plasma donation can save lives and only 9 (8.0%) considered it differently. There was a positive trend that 77(68.8%) out 112 are agree to donate plasma and 35 (31.3%) showed resentment. 77 (68.8%) people out of total sample of 112 show their inclination to donate plasma even without any external pressure but 35(31.3%) are willing to donate plasma in any form of pressure as motivation, personal request from the family members and friends, or via any communication. 92 (82.1%) are willing to motivate others to donate plasma whereas rest 20 (17.9%) are not willing to assume this social duty. In the eye of 23 (20.5%) people out of 112, the plasma selling is justified, they consider it as unethical. However, 89 (79.5%) consider, it is not fair to sell plasma. 98 (87.5%) consider it helpful to fight Covid19 by plasma donation. 14(12.5%) people consider it a false theory, they thought it to be just manipulation by healthcare workers and government (Anderson, L., Newell, K., & Kilcoyne, J., 1999). 70 (62.5%) find it helpful to fight other diseases with plasma and rest 42 (37.5%) do not agree with the idea of plasma donation for other diseases. Here is a mix trend and opinion are divided into distinct viewpoint. 57 (50.9%) consider that plasma donation has consequences to face whereas 55(49.1%) do not consider it harmful and of the view that there is nothing to face after donation of plasma. Most of the people did not already donated plasma i.e. 95 (84.8%) and there are the people how had already donated plasma i.e. 17 (15.2%). Here we find the majority of the people who never donated even blood. They consist of 82 (73.2%) and 30 (26.8%) people are already donor of blood.

CONCLUSION

It is evident from the data collected, 73.2% people are non donor of blood in their whole lifespan, whereas 55.5% people on whole think blood donation is plasma donation. The major reluctance to donate plasma twist around misconception and misbelief that plasma would might hazardous to their health. Our society has dual issues generally lack of education and antieducation environment. People intentionally misguide mobs which results in the shape of such beliefs which halt the ways of progress and shrink the capacity to fight even Corona types pandemics. Of course, motivational tools are our last straw to combat with reluctance to donate plasma for transfusion service. It is a need of hour to have a society which could recruit plasma donors not only for Covid19 but that could prove front line soldiers for any viral disease in future. A personal approach could be very effective in recruiting these recovered donors. The aim of the plasma donor service should be to create a system that encourages individuals in the community to start and then continue donating purified plasma in management, treatment and prevention of a disease in any viral disease, immunoglobulinopathy, burns, shock other than in dire need of covid19. In the case of covid19

recover patient should be aware basic protocol of donating plasma. Last but not the least, donor has to wait 14 days after the complete recovery from covid19, after the complete settlement of symptoms, similarly patient should also be SARS-CoV-2 negative determined by molecular testing to become eligible for plasma donation. Presently many non-commercial and welfare organizations are conducting webinars and campaigns through social media to educate people about plasma donation country wide.

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