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Editorial

Transfusion

Transfusion transmitted infections: a concern of safe transfusion

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Blood transfusion practices are widely utilized across the country in Indian scenario in view of widespread prevalence of anemia and growing domain of healthcare to larger segment of society. Safe transfusion practice is one of the main concern of healthcare agencies and World Health Organization (WHO) has identified blood safety as one of seven priority areas. Blood transfusion remain backbone of heath care involving medical conditions, major surgeries, obstetrics, dialysis units, palliative care and much more. Although used widely and hence transfusion related adverse effects are diverse and common. Transfusion related hazards do occur despite of multiple test, inspection and checks. Many of the hazards take their origin from human error i.e. wrong labeling, patient misidentification and other clerical errors. Transfusion related adverse effect may be classified mainly into three categories; immune mediated reaction, non immune mediated reaction and infectious complications [1]. Among these categories the infectious complication are less frequent than the other complication but they may vary according to prevalence and incidence of infections in particular part of the world. The data from review of the literature show that the infectious complication rate has dramatically reduced in developed countries due to improved screening and rigorous testing for possible transmissible infectious complications [1]. Same trend follows in developing countries like India but the risk still remains high due to high prevalence of infectious diseases and lack of organized health care system.

Keywords: Blood transfusion, WHO, Blood safety, Infections

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Blood transfusion remain backbone of heath care involving medical conditions, major surgeries, obstetrics, dialysis units, palliative care and much more. Although used widely and hence transfusion related adverse effects are diverse and common. Transfusion related hazards do occur despite of multiple test, inspection and checks. Many of the hazards take their origin from human error i.e. wrong labeling, patient misidentification and other clerical errors. Transfusion related adverse effect may be classified mainly into three categories; immune mediated reaction, non immune mediated reaction and infectious complications [1]. Among these categories the infectious complication are less frequent than the other complication but they may vary according to prevalence and incidence of infections in particular part of the world. The data from review of the literature show that the infectious complication rate has dramatically reduced in developed countries due to improved screening and rigorous testing for possible transmissible infectious complications [1]. Same trend follows in developing countries like India but the risk still remains high due to high prevalence of infectious diseases and lack of organized health care system.

The list of possible transmissible infections is long enough and may include viral, bacterial and parasitic agents. The common viral agents may include hepatitis B and C, HIV, Cytomegalovirus (CMV), Human T lymphotropic virus (HTLV) type 1, Parvovirus B-19, West Nile virus and rarely hepatitis A virus. The possible bacterial agents may include some gram negative bacteria like Yersinia, Pseudomonas, Serratia, Acinetobacter, E. coli and gram positive bacteria like coagulase negative staphylococci. Other infections which may be transmitted may include malaria, babesiosis, chagas disease, dengue, chikungunya virus etc [1]. These possible infectious agents warrants testing as recommended for specific region of world taking

In consideration of local disease epidemiology. Indian guideline mandate routine screening of blood and its component for five most common transmissible infections in all the blood bank storing and supplying the blood and the components to the hospitals. These include hepatitis B, Hepatitis A, HIV, Syphilis and malaria [2]. Different incidence and prevalence has been reported in various studies and no uniform data is available regarding the actual magnitude of problem across the country. There is documented difference in the prevalence of various disease in voluntary and replacement donors [3]. Also specific blood group are more prone to particular type of transmissible infections [4].

Substantial measures are taken by National AIDS control organization (NACO) to promote voluntary blood donation and to improve awareness of same in the society. Professional blood donors are highly discouraged in view of high incidence of transmissible infections in them. Even after extensive screening test employed the problem cannot be totally eliminated because of asymptomatic carriers and many of the donors may remain in the window period of the disease in question making them undetectable in their early course. Also voluntary concealing of disease symptoms, high risk behaviour and intravenous drug abuse is common in the developing countries like India. Accurate estimates of risk of transmissible infection are essential for monitoring the safety of blood supply and evaluating the efficacy of the currently employed screening procedures as advised by NACO [5].

Lot of efforts in form of spreading awareness, motivating population for voluntary blood donation, meticulous screening of donor is the need of the hour. Dedicated program are required to be promoted to decrease the problem of anemia in the country especially for the pregnant females and underprivileged population of the country. Rational usage of the blood and elated products is bound to decrease not only the transmissible infections, but also the other transfusion related adver sevents which are much more common and sometimes are even more dangerous than the infectious complications. In case of any adverse effect related to blood transfusion it should be notified to the blood bank and proper registry need to be maintained. Focused research and wider studies are required to ensure the safety of transfusion,

Identification of human and transfusion related errors and their prompt reporting. Safe blood transfusion practices need to be educated to the medical fraternity and the community. This will not only help to ensure safety of persons receiving transfusion but also in decreasing spread of these deadly diseases.

Khare et al [6] in his study observed that seroprevalences of HBsAg, HCV, HIV, Syphilis and Malaria were 1.12%, 0.13%, 0.20%, 0.26%, and 0.07% respectively. There was no separate data for prevalence in Professional donors.

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