

# Significance of Platelets Functionality in Viral and Microbial Infections

Fernanda Silva\*

Department of Internal Medicine, Dr. César Cals General Hospital, Fortaleza, Brazil

## Description

Infectious diseases are significantly reported with high mortality rates by WHO (World Health Organization) every year. Since many decades, novel encounters related to infectious diseases set extra liabilities on health care because of rapid rise of antimicrobial resistance, intestinal sickness, HIV/AIDS, and the latest COVID-19 (Coronavirus Disease 2019) pandemic. As many examination studies keeps on clarifying the pathogenesis of intense contaminations, one striking end saw by numerous investigations is the broad commitment of platelets to have safeguard against microorganisms [1]. Platelets are little; anucleate cells got from their parent cell the megakaryocyte and concerned as precarious in hemostasis and apoplexy. Though, as platelets continually filter the endothelium for vessel harm, they are all around situated to go about as people on call for distinguish attacking microbes bringing about their enactment, which triggers and adds to the host safe reaction to battle the infection.

Alternately, neurotic enactment of platelets show because of overpowering microbe attack, harm to vein dividers, or noninfectious incendiary triggers can frequently prompt thrombo inflammation, an interaction that personally interfaces irritation and apoplexy, which can be adverse to the host and can add to the pathophysiology of the sickness. Thrombocytopenia or low platelet checks are normal in intense contaminations and can associate with infection seriousness. Expanded vascular porousness is likewise normal during thrombo inflammation and disease. The two procedures intently include platelets and can prompt incendiary vasculopathy and apoplexy. In this paper, a general overview of platelets in viral infections is discussed.

Portier et al., have described about the platelets and its functionality on conquering the pathogones especially their ability to react and respond on various kinds of pathogens [2]. The authors have also depicted about the activation function of platelets with the help of secretion of proteins of anti-microbes. Further they also described about the defensive mechanism of immune system by chemokines. They concluded that variant platelet initiation can prompt irritation and thrombotic occasions. Deppermann and Paul have described the recent trends of platelet bacterial interactions and its antibacterial responses [3]. The authors have addressed various proteins involved in infections such as Glycoprotein, LR2/TLR4 etc.

related to some of the bacteria toxins including pertussis, shiga, bacillus anthracis etc. They have concluded that several problems of platelets infections need to be resolved by performing various studies in future. Jenne and Paul have addressed the significant roles of platelets in infection and inflammation related to immune diseases [4]. The authors have described about the imaging platelets, immune sentinels etc. They have depicted their concluding remarks by addressing various clinical complications have also been addressed such as impaired platelet function etc. Assinger have described diverse role of platelets in viral infections [5]. The authors explained a brief summarization of impact of virus on the activation of platelets. They have concluded that advanced research studies are required for addressing the problems of platelets in infections of virus.

Platelets and their related relieved products are addressed to openly and circuitously conquer infection and to sustenance virus perseverance in reaction to some specific viruses which makes platelets an ambiguous rapier in the occurrence of infections of virus. These platelets are included in several difficulties as a counterattack to various infections of virus and in the other hand they also hold satisfactory host reactions.

It is noted that thrombocytopenia is a communal problem in various infections of virus, and these viruses employ several approaches to arbitrate platelet degeneration. Advanced studies are required to overcome many challenges of viral infections. Also, there is a need to perform research on understanding of the significance and role of blood platelets in viral infections. Further advancements to face the challenges of anti-platelets in viral infections are also required in future. These advancements will help in predicting the uses and overcomes of platelets during viral infections.

## References

1. Klinger, Matthias HF, and Wolfgang Jelkmann. "Role of Blood Platelets in Infection and Inflammation." *J Interferon Cytokine Res* 22 (2002): 913-922.
2. Portier, Irina, and Robert A. Campbell. "Role of Platelets in Detection and Regulation of Infection." *Arterioscler Thromb Vasc Biol* 41 (2021): 70-78.
3. Deppermann, Carsten, and Paul Kubes. "Platelets and Infection." *Semin Immunol* 28 (2016): 536-545.
4. Jenne, Craig N., and Paul Kubes. "Platelets in Inflammation and Infection." *Platelets* 26 (2015): 286-292.

\*Address for Correspondence: Fernanda Silva, Department of Internal Medicine, Dr. César Cals General Hospital, Fortaleza, Brazil; E-mail: silvadafernanhematol93@yahoo.com

Copyright: © 2021 Silva F. This is an open-access article distributed under the terms of the creative commons attribution license which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

Received: July 02, 2021; Accepted: July 16, 2021; Published: July 23, 2021

5. Assinger, Alice. "Platelets and Infection—An Emerging Role of Platelets in Viral Infection." *Front Immunol* 5 (2014): 649.

**How to cite this article:** Silva, Fernanda. "Significance of Platelets Functionality in Viral and Microbial Infections." *J Blood Lymph* 11 (2021) : 257.