

The Role of Microscopy in Diagnosing Platelet Dysfunction Disorders

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Bleeding is a common result of an acute injury but chronic bleeding is not a condition that gets much publicity on television, the press or in advertising campaigns. Chronic bleeding is not an insignificant problem for those who suffer from it and many people do not even realize that they have a bleeding condition. Examples of bleeding disorders include hemophilia which is fortunately uncommon and von Willebrand's disease which afflicts as many as 3-6 million Americans. There are many types of bleeding disorders; diagnostic approaches include the evaluation of clotting factors, blood vessel fragility, and assessment of quantitative and qualitative platelet conditions.

Symptoms related to platelet dysfunction (a qualitative abnormality) include frequent nose bleeds, easy bruising, and specific to women, menorrhagia (heavy periods). The utilization of a variety of microscopic techniques is essential to diagnose platelet dysfunction. Electron microscopy is extremely useful to diagnose some conditions that affect platelet size and/or reduced numbers of platelets. A disorder that mimics von Willebrand's disease and could affect 10 to 15 million Americans can be easily diagnosed using a simple electron microscopic technique. Examples of bleeding disorders and the use of microscopy to accurately diagnose the conditions will be discussed.