Haemostasis

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Disruption of the vascular endothelium following injury causes vasoconstriction and exposure of the subendothelial extracel lular matrix. This encourages platelets to adhere, activate and aggregate, resulting in a platelet plug, which also helps limit further blood loss. Platelet adhesion results in their activa tion and release of granules. Alpha granules contain hundreds of proteins, includ ing cytokines and growth factor s; for example, transforming growth factor beta, platelet-derived growth factor, fibroblast growth factor, e pidermal growth factor and vascular endo thelial growth factor. These are involved in the deposition of extracellular matrix, chemotaxis, epithelialisation and the for - mation of new blood vessels (angiogenesis). Platelet aggregation occurs once platelets become activated. At the same time, tissue factor at the site of injury initiates the coagulation cascade (Figure 3.2), resulting in the formation of thrombin. Thr ombin performs various functions, including fibrin generation, which helps to stabilise the platelet plug and form a sca ff old for infiltrating cells .

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