

Renal failure: platelet function, Rx

No specific therapy is required in patients without bleeding, even in the setting of severe azotemia. However, correction of platelet dysfunction is desirable in patients who are actively bleeding or who are about to undergo a surgical procedure (eg, renal biopsy). As with any patient, it is important to identify any sources of bleeding and treat those, if possible

General Rx options:

1. Dialysis: hemodialysis or peritoneal dialysis can partially correct the bleeding time and other in vitro tests of platelet function in approximately two-thirds of uremic patient. Recommended in uremic patients with active bleeding or who are in need of invasive procedures. Heparin-free hemodialysis or peritoneal dialysis (which does not require heparin administration) may be preferable in patients with active bleeding
2. Desmopressin- dDAVP: **The simplest, most rapidly acting, and probably least toxic acute treatment for platelet dysfunction in the uremic patient is the administration of desmopressin**, an analog of antidiuretic hormone with little vasopressor activity. Appears to act by increasing the release of large factor VIII: von Willebrand factor multimers from endothelial cells. Other factors may include increases in platelet membrane glycoprotein expression
3. Correction of anemia: Raising the hemoglobin to approximately 10 g/dL or higher will reduce the bleeding time in many patients, occasionally to a normal level (blood transfusion or recombinant erythropoietic-stimulating agents)
4. Estrogen: Intravenous estrogens have been best studied and appear to have the most reproducible effects, so are recommended as primary therapy rather than oral or transdermal therapy
5. Cryoprecipitate: The infusion of cryoprecipitate (10 units intravenously every 12 to 24 hours) can shorten the bleeding time in many uremic patients

Question:

The fastest way to correct platelet dysfunction in acute renal failure is:

- a. Blood transfusion
- b. Estrogen IV
- c. Cryoprecipitate
- d. Desmopressin

Answer: D - The simplest, most rapidly acting, and probably least toxic acute treatment for platelet dysfunction in the uremic patient is the administration of desmopressin