PROCRIT® (epoetin alfa)
PROCRIT - FDA-Approved Routes of Administration & Minimizing Pain at the Site of Subcutaneous Injection

SUMMARY

PROCRIT FDA-Approved Routes of Administration[1]

PROCRIT Indication	Intravenous Administration	Subcutaneous Administration
Treatment of anemia due to chronic kidney disease (CKD) in patients not on dialysis to decrease the need for red blood cell (RBC) transfusion.	Yes	Yes
Treatment of anemia due to zidovudine in patients with HIV-infection.	Yes	Yes
Treatment of anemia in patients with non-myeloid malignancies where anemia is due to the effect of concomitant myelosuppressive chemotherapy, and upon initiation, there is a minimum of 2 additional months of planned chemotherapy.	Adult - No	Adult - Yes
	Pediatric (5 to 18 years) - Yes	Pediatric (5 to 18 years) - No
To reduce the need for allogenic RBC transfusions among patients with perioperative hemoglobin >10 to ≤13 g/dL who are at high risk for perioperative blood loss from elective, noncardiac, nonvascular surgery.	No	Yes

- Since most hospitals and clinics have internal policies and procedures regarding the administration of intravenous (IV) medications, it is recommended that you consult the policies that exist within your institution.
- Additional studies evaluating methods to reduce pain after SC administration of EPO have been published.[2]

CLINICAL DATA

MINIMIZING PAIN AT THE SITE OF SUBCUTANEOUS INJECTION

- Some patients receiving epoetin alfa subcutaneously have complained of discomfort at the site of injection. The following information is offered to attempt to minimize discomfort during subcutaneous (SC) administration:
  - As noted in the PREPARATION AND ADMINISTRATION section of the PROCRIT Prescribing Information: Preservative-free PROCRIT from single-dose vials may be admixed in a syringe with bacteriostatic 0.9% sodium chloride injection, USP with benzyl alcohol 0.9% (bacteriostatic saline) in a 1:1 ratio using aseptic technique at the time of administration. Do not mix PROCRIT with bacteriostatic saline when administering to pregnant women, lactating women, neonates, and infants [see Use in Specific Populations].[1]
  - Allow the PROCRIT vial to reach room temperature prior to injection. This may decrease some of the pain associated with injection. [3-6] Unopened PROCRIT

formulations in single-dose and multidose vials showed no significant degradation or loss of activity when protected from light and exposed to elevated temperatures ≤86°F (30°C) for up to 72 hours.[7]

- Use a 25-gauge, 5/8 inch size needle.[3,8,9]
- Ice may be applied to the site prior to injection.[3,9]
- Minimize the volume of the PROCRIT injection.[10] The amount per each injection should not exceed 1 mL[8,9] or as recommended by your practitioner or institution guidelines. PROCRIT is available in 10,000 U/mL, 20,000 U/mL, and 40,000 U/mL vials that allow delivery of small volumes.
- Rotate injection sites. Any sites used during the same week should be separated by at least 1 inch.[8] As illustrated in the PROCRIT Prescribing Information under Instructions for Use, common SC injection sites include the abdomen (except for the 2 inch area around the navel), the front of the middle thighs, outer area of upper arms, and the upper outer area of the buttocks.[1] Sites with fewer sensory nerve endings, blood vessels and bones near the surface are preferred.[8]
- Ensure that no liquid is on the needle or in the needle tip prior to injection. Pull all liquid fully into the syringe prior to injection.[5]
- Administer slowly to minimize possible discomfort that may occur with rapid injection under high pressure.[8]
- Alcohol swabs may be used prior to injection. However, alcohol should be allowed to dry prior to injection.[8]
- Pinch a fold of skin and inject PROCRIT at an angle of 90° to the injection site.[1]
- EMLA® cream (lidocaine 2.5% and prilocaine 2.5%) may be applied to the injection site 2 hours prior to administering PROCRIT. In a double-blind, placebo-controlled, paired-comparison study in 48 hemodialysis patients receiving epoetin alfa (EPO), use of EMLA cream significantly reduced pain at the site of injection (P=0.046).[4]
- Although there is conflicting evidence to support its use, lidocaine 2% may be added to the syringe just prior to injection. One study admixed 0.2 mL of lidocaine for injection 2% with PROCRIT prior to injection in pediatric patients.[11] Results showed significantly decreased pain on injection compared with placebo. In contrast, another study admixed lidocaine 2% with EPO in 59 hemodialysis patients and showed that the combination may have reduced the therapeutic effect of EPO.[12]

LITERATURE SEARCH

A literature search Ovid MEDLINE®, Embase®, BIOSIS Previews®, and Derwent Drug File databases (and/or other resources, including internal/external databases) was conducted on 16 August 2023.

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