



Wilderness First Aid Scenario

DEEP WOUND WITH SEVERE BLEEDING**Victim 1 – Youth With Deep, Contaminated Wound; Severe Bleeding From Right Lower Leg****SUMMARY**

A crew of 10 from the Chicago area is hiking during spring break in the Grand Canyon. The trail is very narrow in a steep gorge with sharp rocks. There are three adult leaders and seven youth members ranging in age from 14 to 17. They checked in with the ranger before beginning their seven-day trek, and they are now on Day 2. It is early afternoon and the weather is clear, sunny, and 82 degrees F. The humidity level is 15 percent. The assistant crew leader slips near the edge of a river on a wet rock with sharp edges. He sustains a significant wound on the calf of his leg with immediate, profuse bleeding. There is no head injury or loss of consciousness.

SCENARIO DETAIL

Two members of the crew are trained in WFA: one adult and the injured youth. They have a first-aid kit with them. They are not acclimated to the low humidity. The next ranger station is about 5 miles ahead. The wound is deep and about six inches long with jagged edges; it is contaminated with muddy water and dirt. In addition, the immediate area is covered with bird droppings. No one else is injured.

STUDENT RESPONSE**1. Scene safety:**

Ensure that the scene assessment is completed. The trail is narrow with sharp rocks and needs to be addressed. Disposable nonlatex gloves are needed before giving care. This should all be done rapidly due to the serious bleeding.

2. Primary assessment:

The victim is alert and reports pain, and there is profuse bleeding from the lower right leg. The wound is contaminated with dirt, and there are many bird droppings on the surrounding rocks.

3. Secondary assessment:**a. Physical exam:**

Legs (DOTS)—

D (deformities, depressions, indentations, discoloration)—No deformity in either leg

O (open injuries, penetrating wounds, cuts, scrapes)—Profuse bleeding continuing from wound in the lower right leg; area is obscured by pants

T (tenderness)—Area around the wound is tender

S (swelling)—No obvious swelling

Head—No tenderness, no asymmetry

Neck—No tenderness, able to move easily

Shoulders—No open wounds, no deformity

Chest—Breathing, no deformity

Abdomen—Soft

Pelvis—Stable, difficult to examine as the right hip is flexed due to pain in the right calf

Genitals—Dressed in hiking gear, no complaints from the victim

Legs—As above

Arms—No deformities, a few superficial abrasions, no loss of feeling; victim can move fingers and hands when asked

Back—No deformities, no localized tenderness

b. Vital signs:

LOC: A&Ox4

Heart rate: 85

Respirations: 20

Skin: As above



+ Wilderness First Aid Scenario **Deep Wound With Severe Bleeding**

c. **SAMPLE**

S – As above

A – No known allergies

M – None

P – None

L – Lunch, and victim has been hydrating from backpack; voided one hour ago

E – Hiking

Vital signs (second set, taken some time after assessments completed):

LOC: No change

Heart rate: 100

Respirations: 20

Skin: Pale and slightly cool; pressure dressing on calf is saturated with blood

After two hours of rest and elevation of the injured leg, the pressure bandages remain in place. The dressing is saturated with blood, but no new bleeding has come from the site and the pain is beginning to subside.

Vital signs (third set):

LOC: No change

Heart rate: 76

Respirations: 16

Skin: Warm and dry with normal color

POST-SCENARIO DEBRIEF

- Scene safety: Did the crew move away from the sharp rocks so that additional injuries could be prevented? Did they use personal protective equipment while treating the victim?
Due to the large amount of blood flowing from the wound, the safety assessment must be done rapidly.
- What signs and symptoms did you find?
The deep wound was hidden under clothing and took some time to uncover. In such cases, the wound needs to be exposed and examined as quickly as possible. The bleeding was venous and the wound was contaminated with debris, muddy water, and possibly bird droppings. Discuss treatment of venous vs. arterial bleeding.
- How was the wound cleaned?
Discuss the need to do this. Irrigation with clean water needs to occur to help minimize the effects of contamination—in this case, mud, dirt, and possible exposure to bird droppings.
- The initial pressure dressing became saturated with blood.
Despite this, discuss the need to keep the initial dressing in place.
- Did the crew treat the victim for shock?
Keep the victim warm and dry, and watch for signs of shock. As long the victim's level of consciousness remains stable, continue hydration to help counteract the loss of blood; this is also important because the crew members, including the victim, are not acclimated to the low humidity.
- How did the crew access help? Would it be possible for the victim to walk out with the crew after confirming the bleeding has stopped?
- Did the crew have the items they needed to provide care? What could they do if all the pressure bandages have been used but the wound is still bleeding?
Discuss alternatives.
- How did others in the crew react? Did they stay calm? How could you control the situation?
Discuss having one person in charge—speaking calmly and taking command of the situation.