

Low Budget Moulage Techniques

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Figure 3: Fake compound fracture created from modeling clay and PVC pipe.



Figure 1: "Soap blood" used in a training scenario to depict an actively bleeding wound.



Figure 2: Actively bleeding fake laceration created from modeling clay, IV tubing and syringe.



Figure 3: Fake compound fracture created from modeling clay and PVC pipe.



Figure 1: "Soap blood" used in a training scenario to depict an actively bleeding wound.

EMS educators frequently utilize moulage to provide students with opportunities to practice trauma patient assessment and management in an environment that is as realistic as possible. There are many commercially available moulage kits available to instructors and training organizations with costs ranging from around \$100 to several hundred dollars. While these kits provide an excellent array of realistic wounds, fractures, makeup, etc., many EMS education programs do not have the budget to purchase them along with all the other necessary equipment and supplies to run successful classes.

When faced with budgetary constraints, the only real limitation to providing quality education in trauma assessment and management is the creativity of the instructor. The purpose of this article is to provide suggestions for a few simple moulage techniques that require relatively commonly found items and result in very little cost to the instructor or training program. I have found these simple techniques very beneficial to creating realism in the training scenarios used in the first aid and emergency care classes that I teach.

Obviously, one of the most common items needed to create realistic looking trauma wounds is fake blood. I found that a fairly large quantity of fake blood can be made with blue dishwashing detergent and red food coloring. The red food coloring is mixed in a few drops at a time with blue detergent until the desired color of maroon/dark red is obtained to simulate blood. The "soap blood" seen in Figure 1 not only appears real, but its consistency is very similar to that of real blood. Another positive to "soap blood" is that it washes almost completely out of triangular bandages, allowing them to be used repeatedly and thus saving additional cost.

Two other "low budget" moulage techniques include constructing fake lacerations and compound fractures. The supplies necessary to create these effects include modeling clay that is close to skin tone in color, a piece of small-diameter PVC pipe, black makeup, and the fake blood described above. An adhesive like liquid latex or spirit gum (easily purchased around Halloween at many stores) may also be necessary in order to get the wound or fracture to stick to the model patient's skin, depending on the desired location. If an actively bleeding wound is desired, a piece of IV tubing and a 30- or 60-cc syringe are also needed to create the effect.

To create fake wounds (see Figure 2), use a knife or tongue depressor to make a laceration in a piece of the modeling clay. Use the black makeup on the inside edges of the laceration to create the appearance of use a knife or tongue depressor to make a laceration in a piece of the modeling clay. Use the black makeup on the inside edges of the laceration to create the appearance of depth and drip fake blood onto/around the wound for bleeding. To create an actively bleeding wound, simply insert the open end of the IV tubing up through the center of the laceration and attach the syringe filled with fake blood to the other end. The syringe and tubing can be hidden in the model patient's clothing to add realism.

Create a fake compound fracture (Figure 3) by cutting a piece of the small-diameter PVC pipe in half lengthwise and sticking one or both ends of the pipe into modeling clay. Black makeup can again be used around the inside edges where the "bone ends" protrude to create the appearance of depth. Drip fake blood around the "bone ends" and around the fracture site for added realism. Depending on the desired location of the fracture site, the modeling clay may stick well enough to the model patient's skin on its own but spirit gum or liquid latex can be used to better adhere the fracture to the skin.

When teaching EMS students evaluation and management of the trauma patient, allowing them to practice in realistic situations is critical to their attaining skill proficiency. While it is impossible to recreate all the drama, emotion and chaos that often surround a bad trauma scene, it is possible to create at least some degree of realism with these low-cost moulage techniques.