

YET ANOTHER PIERCING TO PLAY WITH: REMOVAL OF SURFACE ANCHORS

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Do you know your body jewelry ABCs—anchors, barbells, and captive bead rings? In emergency departments around the world, it has become almost commonplace to encounter patients with various types of body modifications, including tattooing and body piercings. Just when you might have thought you had seen it all, along comes a new “kid on the block,” and the “kid” is becoming very popular. Surface anchors (also known as microdermals, dermal anchors, and anchors) were introduced to the piercing community around 2007, and in recent years, their prevalence has exploded exponentially.^{1–3} Despite the increasing visibility of this new style of body jewelry, to date, only 2 case reports have been published in medical journals about the medical issues associated with surface anchors.^{4,5} This article focuses on providing emergency medical professionals with a step-by-step guide to the removal of this type of jewelry.

Before explaining the steps for removal, a quick look at the jewelry itself is in order.

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J Emerg Nurs 2013;39:e7-e14.

Available online 9 November 2012.

0099-1767/\$36.00

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<http://dx.doi.org/10.1016/j.jen.2012.08.009>

Parts of a Surface Anchor:

- **Foot:** The longer front part of an anchor
- **Heel:** The shorter back part of an anchor
- **Ornament:** The visible disc, gem, or ball that threads into the post on a surface anchor
- **Post:** The portion of the anchor that connects the foot and heel (also known as the base) to the ornament outside the skin

See [Figures 1, 2, 3, and 4](#) for varieties of surface anchor jewelry and a size reference.

Realities of Removal

The reality is that, if possible, surface anchors should be left in place. If there is a concern about whether the patient can undergo magnetic resonance imaging while wearing the jewelry, a strong hand-held magnet can be used to verify whether the jewelry is ferromagnetic (attracted to the magnet). Most surface anchors are made of titanium or stainless steel, which are not ferromagnetic, and therefore they should not prevent a patient from undergoing magnetic resonance imaging. In addition, most surface anchors are very small and easily identifiable and should not interfere with other diagnostic imaging studies.^{1,6,7}

If for emergency, obstetrical, or surgical care or procedures it is determined that removal of the surface anchor must be undertaken, training and tools are the keys. Tools certainly can make the task easier, but they may damage the jewelry if they are not used properly. Professional piercers use specialized tools to insert and remove surface anchors ([Figures 5, 6, and 7](#)). In our experience, these tools are not commonly available in hospital emergency departments...but hemostats, gloves, and gauze are available.

If it is determined that it is necessary to remove the surface anchor, 3 basic steps should be followed (along with a fourth step if all else fails):

1. Find it
2. Grab it
3. Pull it
4. Just in case ...



FIGURE 1

Varieties of surface anchor jewelry. (The visible portion of the surface anchor jewelry is threaded into the L-shaped post. It is generally unnecessary to unscrew it for removal or insertion.) (Photo courtesy of Industrial Strength Body Jewelry; www.isbodyjewelry.com.)

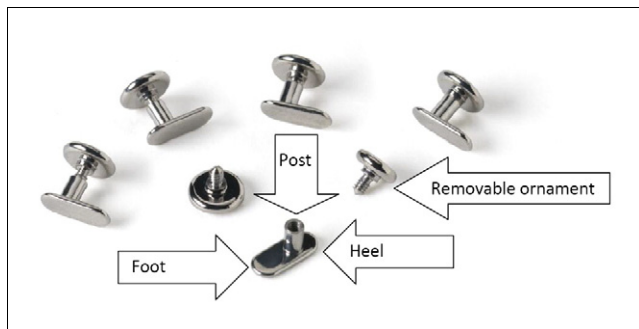


FIGURE 2

Varieties of surface anchor jewelry. (The visible portion of the surface anchor jewelry is threaded into the L-shaped post. It is generally unnecessary to unscrew it for removal or insertion.) (Photo courtesy of Industrial Strength Body Jewelry; www.isbodyjewelry.com.)



FIGURE 3

Varieties of surface anchor jewelry. (The visible portion of the surface anchor jewelry is threaded into the L-shaped post. It is generally unnecessary to unscrew it for removal or insertion.) (Photo courtesy of Industrial Strength Body Jewelry; www.isbodyjewelry.com.)



FIGURE 4

Size reference for surface anchor jewelry (surface anchors come in various shapes and sizes). (Photo courtesy of Anatometal; www.anatometal.com.)



FIGURE 5

Specialized surface anchor removal tools. (Photo courtesy of Industrial Strength Needles; www.isneedles.com.)

Step-by-Step Removal of Surface Anchors

STEP 1: FIND IT

If the removal of the jewelry is required, use upright or lateral positioning to minimize possible aspiration risk or loss of small jewelry parts if clinically appropriate. Before removing the jewelry, clean it and the surrounding area with an antibacterial product. After ensuring the area is dry and using gloved hands, carefully evaluate the jewelry by gently pushing, pulling, or tilting it in an attempt to determine the location of the “toe” and “heel” of the jewelry. (The heel of the jewelry is



FIGURE 6

Specialized surface anchor removal tool. (Photo courtesy of Industrial Strength Needles; www.isneedles.com.)

the shorter part of the base.) On thicker skin, it may not be apparent where the toe is until you are pulling fairly hard. Once you have found the heel, firmly press down on the skin just adjacent to the jewelry to support the surrounding tissue. Holding on to the ornament, and applying pressure toward the toe, gently rock or pull up on the jewelry to dislodge it from tissue that might be adhering to it. Massage of the tissue surrounding the anchor before removal can be an invaluable technique to aid in removal (Figure 8).

STEP 2: GRAB IT

Grasp the ornament portion of the surface anchor (ie, the gem, ball, or disc) with hemostats (preferably nonserrated or brass-jaw type) or a surface anchor removal tool. Remember, do *not* remove the threaded end of the visible jewelry. Doing so will result in having virtually nothing to grab onto! If the ornament is no longer attached to the anchor but the anchor is still visible through the skin, the same removal techniques may be used; however, it most likely will be a more challenging experience. Occasionally the skin will have completely healed over the anchor. Before cutting the jewelry out, you may try cutting a very small hole with a needle and attempting removal with hemostats first (see Step 4 below) (Figures 9 and 10).

STEP 3: PULL IT

After firmly grasping the jewelry end with hemostats, pull and begin to remove the jewelry. This technique is similar to taking a foot out of a boot, heel first. The anchor should



FIGURE 7

Specialized surface anchor removal tool. (Photo courtesy of Industrial Strength Needles; www.isneedles.com.)

pop out very easily if the tissue just beyond the heel side is well supported. If the tissue is not well supported, this technique may not work (Figure 11).

STEP 4: JUST IN CASE

If the aforementioned techniques are unsuccessful, even with patience and gentle tissue massage, a needle may need to be used to widen the opening and free the jewelry from any adherent tissue. The tip of the needle should be pushed down into the piercing channel right next to the post and need not go deeper than the bevel. Most surface anchors are only 2 to 2.5 mm under the surface of the skin. The needle may need to puncture several different spots around the post of the jewelry before the anchor can be completely removed. The utilization of local anesthetic and a needle or scalpel to aid in removal can be considered but is very rarely required (Figures 12, 13, and 14).

Body piercing and tattooing have been practiced in cultures around the world for well over 5000 years. With the recent introduction and exploding popularity of surface anchors, emergency nurses will almost certainly be caring for patients with ABCs—anchors, barbells, and captive bead rings! (Figures 15, 16, 17, 18, and 19).

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FIGURE 8

Surface anchor removal step 1. (Photo from the Body Piercing Removal: Healthcare Professionals Handbook [www.Peds-R-Us.com]. Illustration courtesy of Jennifer Klepacki [www.theconjured.com].)

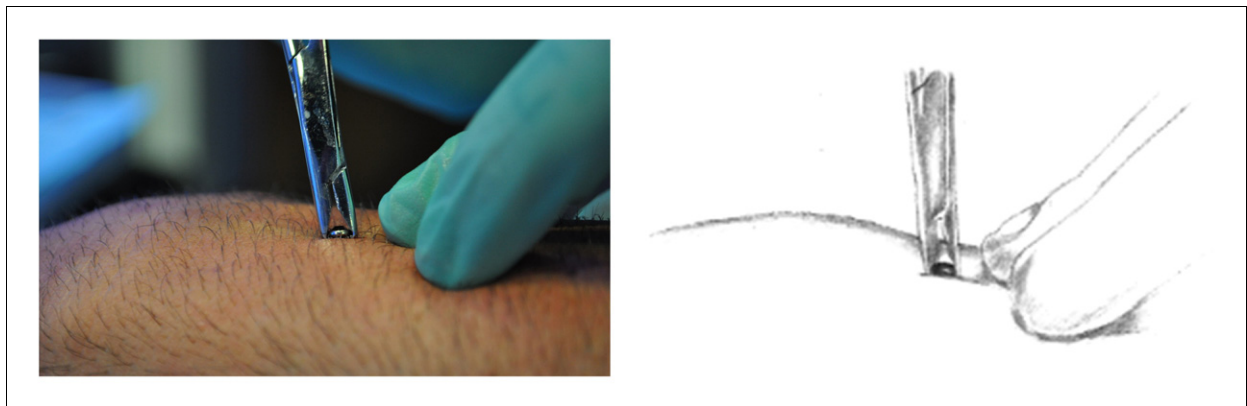


FIGURE 9

Surface anchor removal step 2. (Photo from the Body Piercing Removal: Healthcare Professionals Handbook [www.Peds-R-Us.com]. Illustration courtesy of Jennifer Klepacki [www.theconjured.com].)

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FIGURE 10

Surface anchor piercings (with and without external ornament attached). (Photo courtesy of Shane von Ranninger [www.skinfactorytattoo.com]. Illustration courtesy of Jennifer Klepacki [www.theconjured.com].)

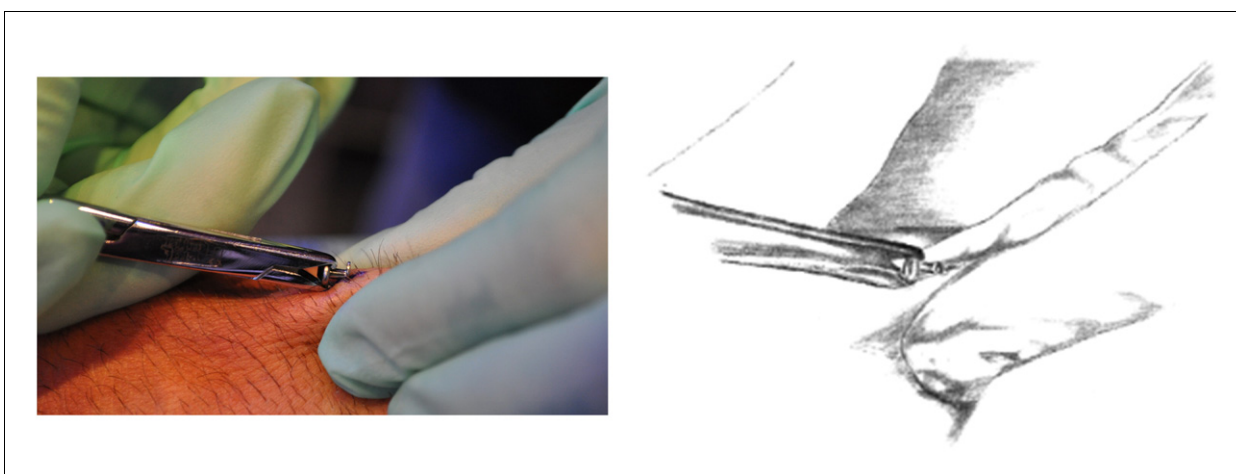


FIGURE 11

Surface anchor removal step 3. (Photo from the Body Piercing Removal: Healthcare Professionals Handbook [www.Peds-R-Us.com]. Illustration courtesy of Jennifer Klepacki [www.theconjured.com].)

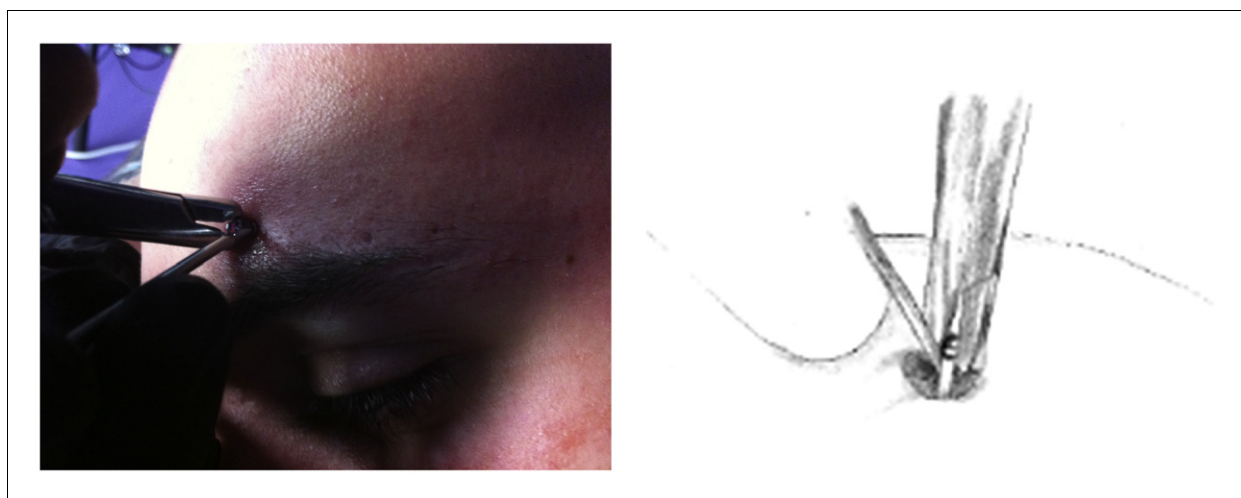


FIGURE 12

Surface anchor removal step 4. (Photo from the Body Piercing Removal: Healthcare Professionals Handbook [www.Peds-R-Us.com]. Illustration courtesy of Jennifer Klepacki [www.theconjured.com].)

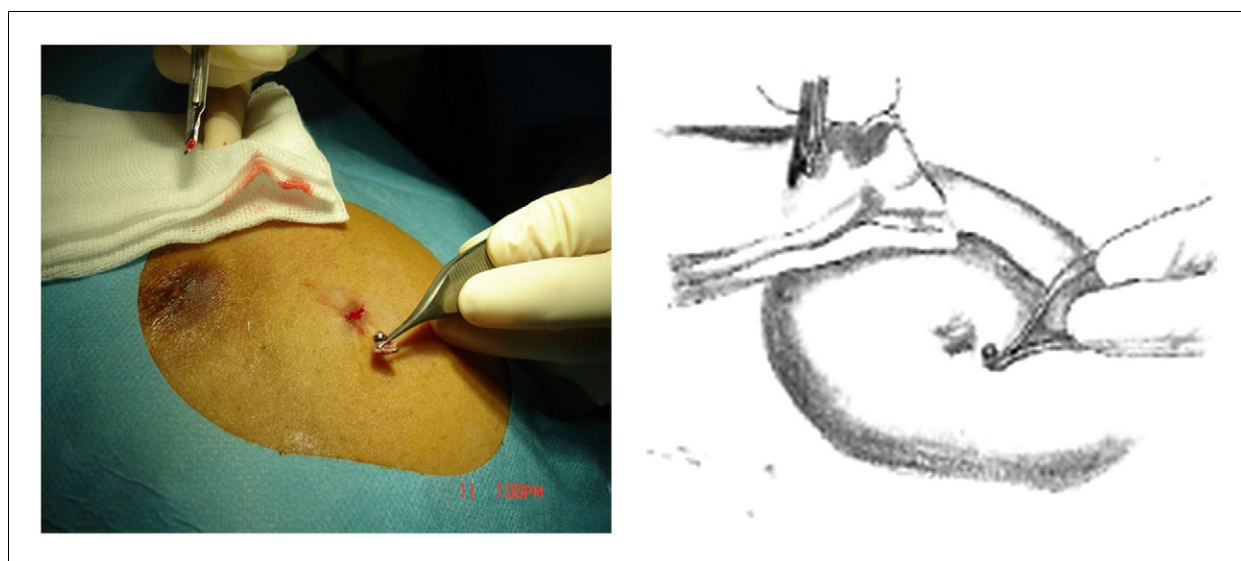


FIGURE 13

Surgical removal of surface anchors. (Photo courtesy of Véronique Blatière, MD. Illustration courtesy of Jennifer Klepacki [www.theconjured.com].)



FIGURE 14

Tissue appearance after surface anchor removal. (Photo from the Body Piercing Removal: Healthcare Professionals Handbook [www.Peds-R-Us.com]. Illustration courtesy of Jennifer Klepacki [www.theconjured.com].)



FIGURE 15

Abdominal surface anchor. (Photo courtesy of Jef Saunders; www.rockstarpiercing.com.)



FIGURE 16
Facial surface anchor piercing. (Photo courtesy of Jef Saunders; www.rockstarpiercing.com.)



FIGURE 17
Clavicle surface anchor piercings. (Photo courtesy of Shane von Ranninger; www.skinfactorytattoo.com.)



FIGURE 18
Wrist surface anchor piercings. (Photo courtesy of Shane von Ranninger; www.skinfactorytattoo.com.)



FIGURE 19
Armband surface anchor piercings. (Photo courtesy of Jef Saunders; www.rockstarpiercing.com.)