

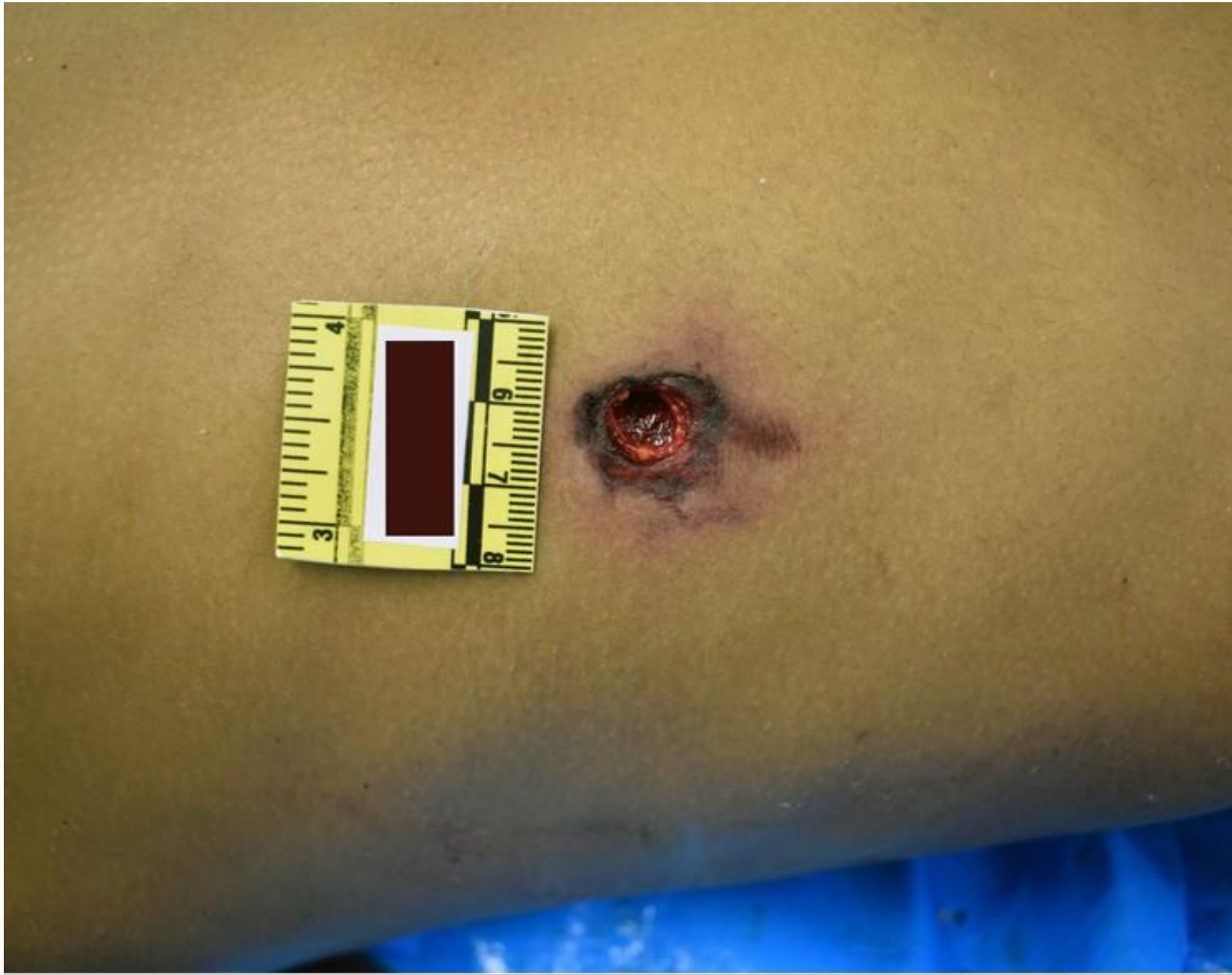


Case #64

NAME Educational Activities Committee

Case provided by:

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1. This wound on the lateral right side of the chest most likely represents:

- Atypical gunshot entrance wound
- Chest tube insertion site
- Shored exit gunshot wound
- Stab wound
- Embalming trocar puncture defect

Answer...

A. Atypical gunshot entrance wound – (60.98 % of responses)

Our picture shows a punched-out round defect with irregular margins and a wide irregular abrasion ring, consistent with an atypical gunshot wound of entrance. This was a re-entry wound of a projectile that perforated the decedent's forearm before penetrating the trunk (see next image).

Atypical gunshot wounds are seen when the bullet is destabilized prior to entering the body and consequently does not enter the body nose first, but sideways or at an angle, and at a reduced velocity. The most common causes of an atypical entrance wound are bullet ricochet and interaction with an intermediate target (in this case, the forearm).



B. Chest tube insertion site (9.28 % of responses)

Chest tubes are inserted by initially making a superficial ~1-inch incision of the skin between two ribs (usually 4-5th or 5-6th ribs), widening the incision with a surgical clamp, and then inserting the chest tube through the soft tissues and musculature of the intercostal space until the pleural cavity is breached. If the tube is removed prior to autopsy the wound would appear to be an incised wound, rather than being a punched-out round defect. There would also not be an irregular abrasion ring of the surrounding skin.

C. Shored exit gunshot wound (23.19 % of responses)

A shored exit results from the exit site being in contact with another object (walls, chairs, floors, thick clothing). As the projectile attempts to exit the body, the skin is pushed outward, causing it to impact the adjacent firm material, and leading to an abrasion ring on the skin surrounding the exit wound. Due to the tissue loss in the process, attempts to re-approximate the lacerated skin will usually yield less than perfect results. Our picture shows a round defect with a wide and irregular abrasion ring, more consistent with an atypical gunshot wound of entrance.

D. Stab wound (2.89% of responses)

Stab wounds are sharp force injuries that are deeper than their length on the skin surface. They have corners, or “angles”, and sides/edges or “margins.” Depending on the tool used, there could be two sharp angles or one blunt and one sharp angle. These injuries typically do not have marginal abrasions. The punched-out defect seen in our image is inconsistent with a typical stab wound.

E. Embalming trocar puncture defect (3.68% of responses)

The embalming process usually consists of two steps: Arterial embalming and cavity embalming. Arterial embalming is generally done through the carotid vessels and other large arteries and replaces blood throughout the circulation with embalming fluid. In cavity embalming a trocar is inserted close to the navel to clear gas and body fluids from the abdominal cavity and inject embalming fluid. Defects from the embalming process would typically be around the base of the neck and close to the navel. They would also not have an abrasion ring surrounding the defect and would generally be sewn shut or covered with trocar “buttons” after the process is completed.

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