

Health & Safety

AB-OHS-2020-011 | July 2021

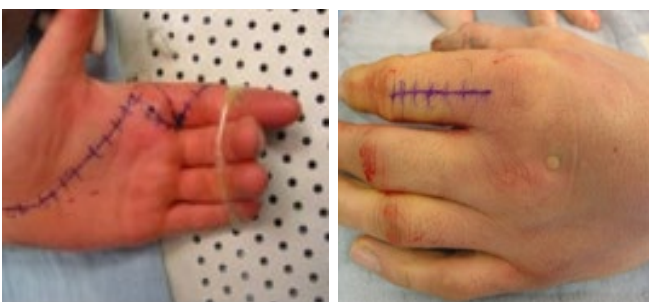
Compressed Air Injection Injury

Background

An operative on one of our projects received a compressed air injury to the palm of his hand from a paint sprayer.

What happened?

The IP was involved in the assembly and spray painting of site permit booths. The nozzle of the sprayer blocked, and the IP started to clean/unblock the nozzle. It appears that while disassembling the nozzle, the IP inadvertently touched the trigger releasing some of the stored compressed paint which remained in the line. The IP received an injection injury to the palm of his hand. The size of the puncture wound was approximately 2mm with a small area of localized swelling.



(Photographs are sample / typical, not the IP in this case)

What's been found?

The operative was wearing gloves, but the paint and compressed air penetrated the glove before piercing the IP's skin and injecting paint into the IP's hand.

The operative turned off the compressor but did not fully de-pressurise the system (correct procedure) before he started cleaning/unblocking the equipment.

The spray-painting tool works at a deceptively high pressure as it leaves the nozzle in the form of a narrow jet before dispersing or misting out.

Recommendations & Actions

- Manufacturer's Instructions – to be present and reviewed before using any new tool or piece of equipment.
- Operators of high-pressure guns and their supervisors to be informed about the seriousness of such injuries.

Things to Consider

Line of Fire awareness training.

Lessons Learnt

High-pressure injection injuries need immediate medical treatment.

Research has shown that patients usually have minimal complaints following the event. Mostly there is only a small puncture wound to the skin. After some hours swelling, pain and sensibility impairments appear.

The initially mild symptoms lead to a delay in seeking treatment and so damage can spread out, increasing the chance of permanent complications and amputation.



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Compressed Air Injection Injury

First Aid Response

- Do take the Injured Party to A&E as fast as possible
- Do Not explore the puncture wound
- Do Not use a compression bandage
- Do Not remove the material with a solvent
- Do Not attempt to push the fluid to the outside or make a relieving incision for decompression
- Do Not apply an ice pack to reduce swelling

PRESSURE RELIEF PROCEDURE

IMPORTANT! To avoid possible serious body injury, always follow this



procedure whenever the sprayer is shut off, when checking it, when installing, changing or cleaning tips and whenever you stop spraying.

1. Engage the gun safety latch.
2. Turn the unit off & unplug it from the electrical outlet.
3. Disengage the gun safety latch and trigger the gun to relieve residual fluid pressure. Hold metal part of the gun in contact with grounded metal pail.
4. Turn the Priming Valve to the open (priming) position to relieve residual fluid pressure.
5. Re-engage gun safety latch and close Priming Valve.

If the SPRAY TIP OR HOSE IS CLOGGED, follow Step 1 through 5 above. Expect paint splashing into the bucket while relieving pressure during Step 4.

SPECIFIC SAFETY RULES

HANDLE THIS UNIT AS YOU WOULD A LOADED WEAPON!

Extreme high pressure spray can cause extremely serious injury.

OBSERVE ALL WARNINGS!

WARNING: HIGH PRESSURE. Never leave pressurized system unattended. Always follow the Pressure Relief Procedure. Take precautions to avoid high pressure component rupture.

DANGER: INJECTION INJURY. Skin injection by high pressure paint is not a simple cut. It must be treated surgically immediately.