

FEEDBACK TO THE FIELD (FT2F) #16:

Junctional Emergency Treatment Tool (JETT): Observations

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DISCLAIMER

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BACKGROUND:

- The Junctional Emergency Treatment Tool (JETT™) is FDA-cleared for control of difficult inguinal bleeding common in high extremity thigh/groin wounds where ordinary extremity tourniquets (TQs) cannot fit

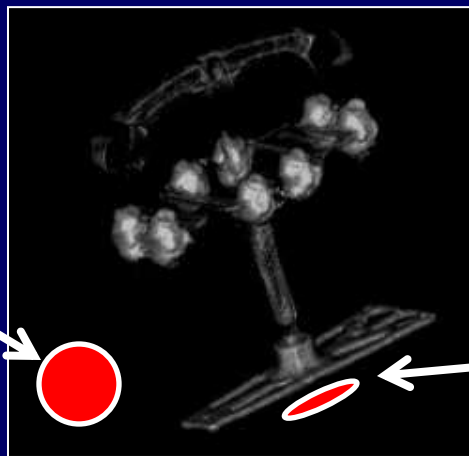


BACKGROUND:

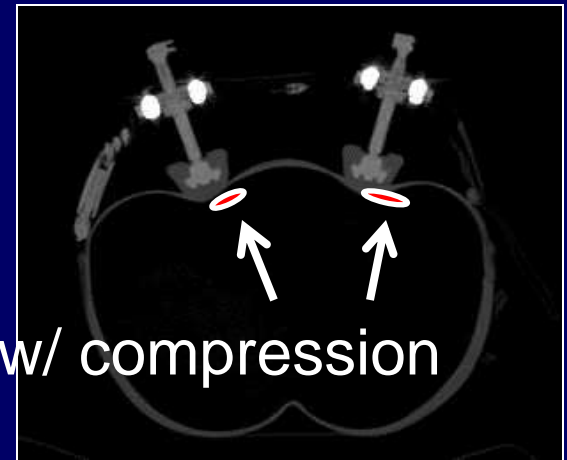


- Two individually-adjustable compression pads allow for bilateral (or unilateral) occlusion of blood flow to the lower extremities

Vessel w/o
compression

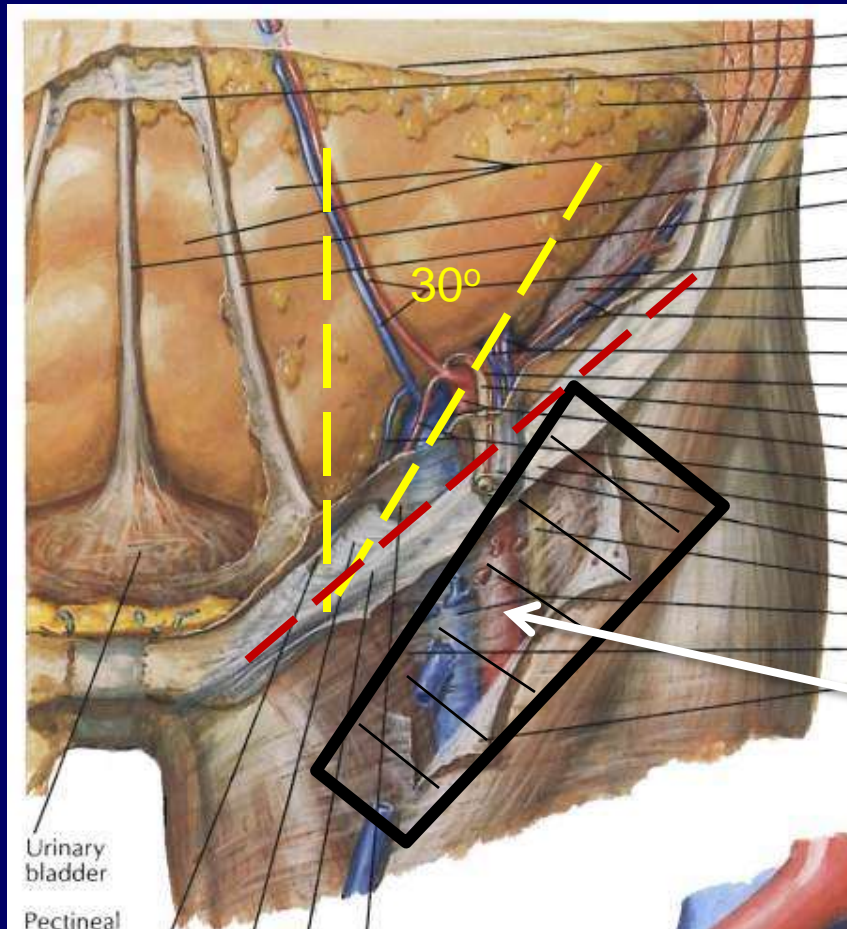


Vessel w/ compression



BACKGROUND:

- Recommended compression pad placement is...



- 30 degree angle to apex
- Below the inguinal ligament (— — —)

* Note: Pad footprint”
over femoral vessels

JETT PLACEMENT ON A MANNEQUIN

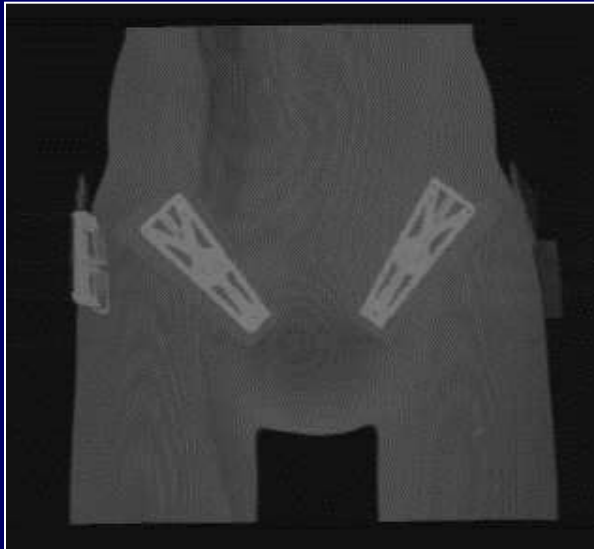


Viewed from the head



Viewed from the feet

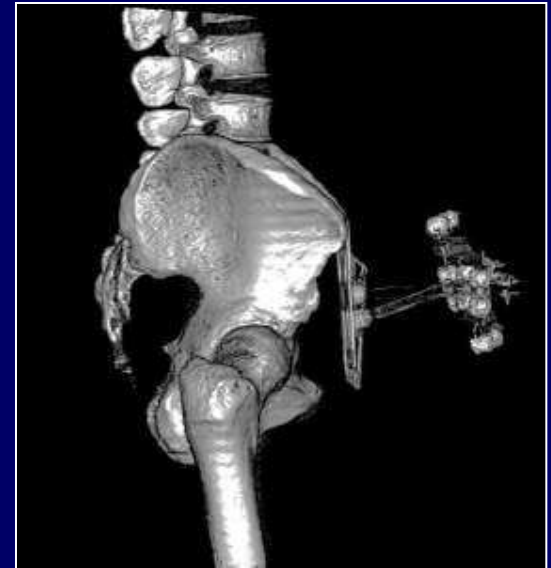
JETT PLACEMENT ON A MANNEQUIN



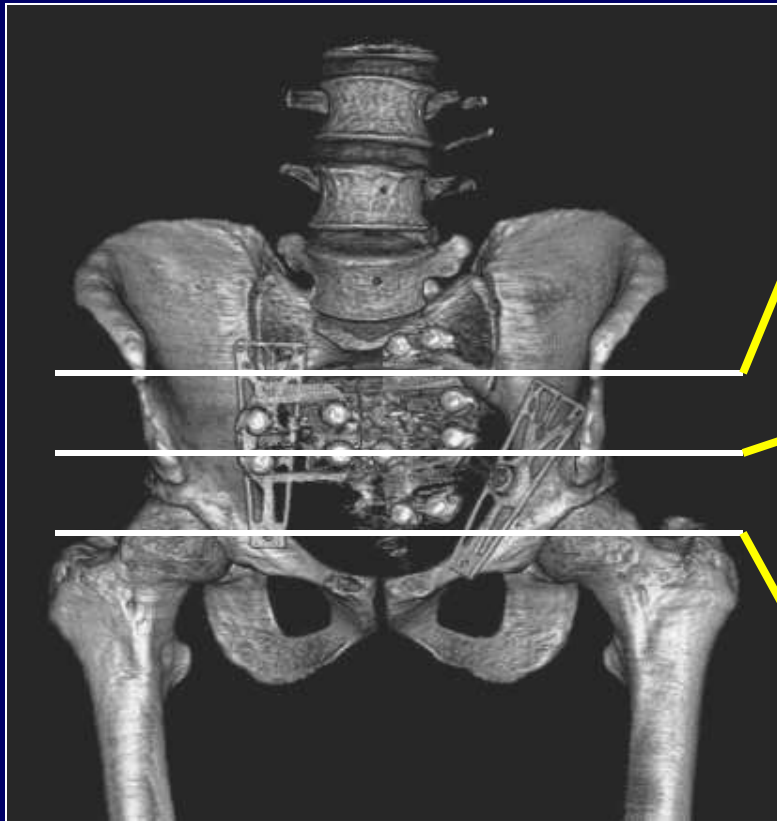
CASE STUDY:

- Based on autopsy at the Office of the Armed Forces Medical Examiner (OAFME), Dover AFB
- Medical intervention in this case included a JETT, a device not previously encountered



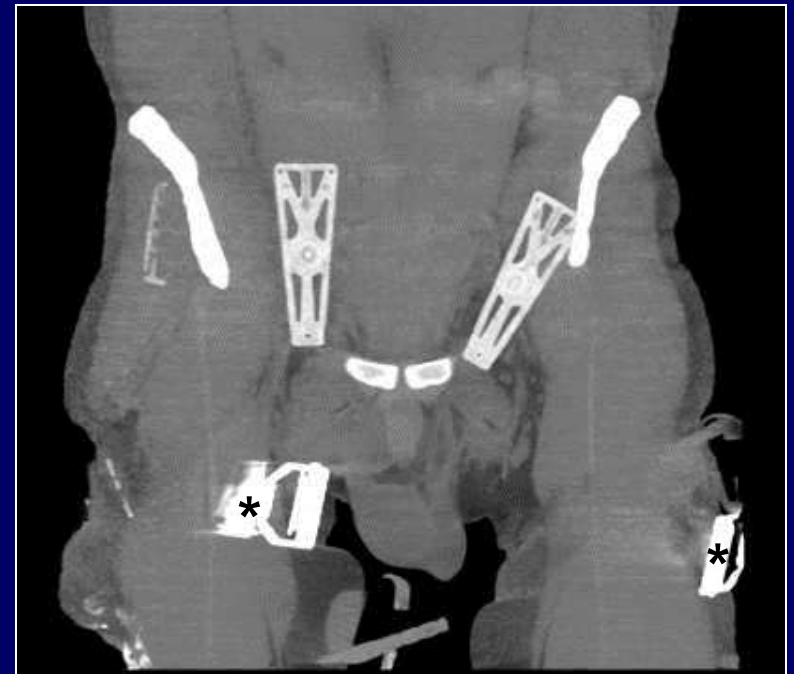
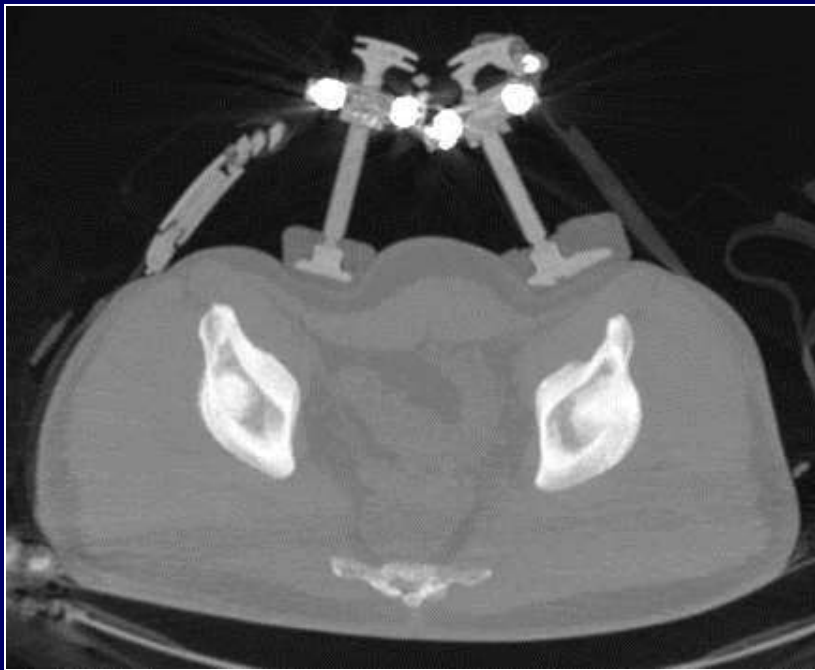


CT VIEW OF IN-SITU POSITIONING:



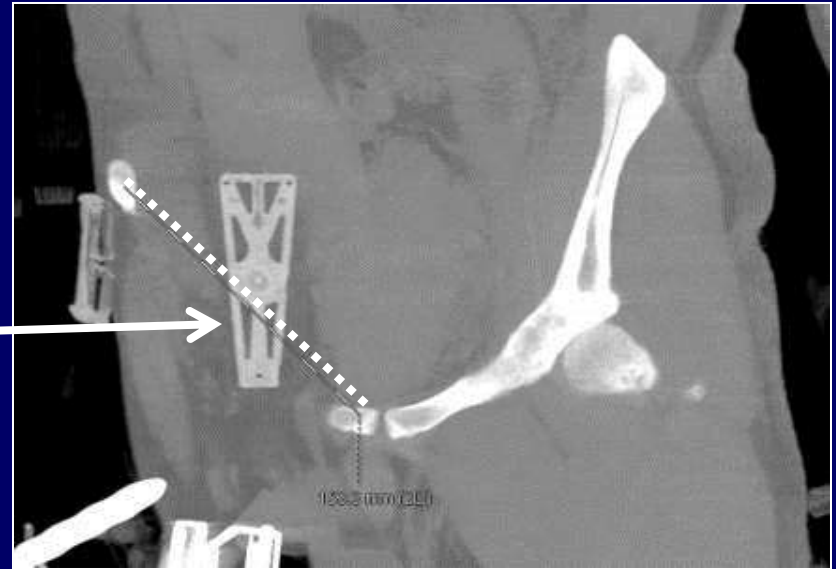
CT VIEW OF IN-SITU POSITIONING:

- Note placement of the two compression pads



*Note: Extremity TQs were also placed on proximal thighs

Right pad footprint in relation to the inguinal ligament (.....)



Left pad footprint in relation to the inguinal ligament (.....)

OBSERVATIONS:

- Left pad was positioned close to recommended site. Right pad was oriented vertically (as opposed to a 30 degree angle), and only its lower portion extended below the inguinal ligament
- Both compression pad screws were inclined toward the midline, and their T-handles were in contact
- We can not assume that the position at the time of CT was the position at application; positional changes may have occurred during transport
- This case exhibited evidence of non-survivable blast injuries at autopsy

COMMENTS:

- The JETT is manufactured by North American Recue (Greer, SC)
 - Cost: \$220 (approx)
 - Weight: 725 gm / 1 lb, 9 oz
 - FDA (510k) clearance: 03Jan13 (K123194)
- Researched & tested by USAISR and AMEDDC&S; performed safely & effectively in ideal settings
 - Accuracy in targeting the pressure point is essential to the JETT's effectiveness
- Further DoD test & evaluation is underway, including a comparison of the 4 currently-available junctional tourniquets (JTQs)

REFERENCE:

- Gates KS, Baer L, Holcomb JB. Prehospital emergency care: evaluation of the junctional emergency tourniquet tool with a perfused cadaver model. J Spec Oper Med. 2014 Spring;14(1):40-4
 - JETT was compared with the Combat Ready Clamp (CRoC™)
 - When the JETT or CRoC was applied in the groin, there was an immediate cessation of fluid flow from the common femoral artery while the inlet flow aortic pulsatile pressure was maintained
 - The time to bilateral application of the JETT was faster (10 seconds vs. 68 seconds) than bilateral sequential application of two CRoC devices

DoD LOGISTICS:

- Over the last 12 months, the DoD has spent \$508k on JETT purchases
- JETT may be purchased via the Medical Supply System (ECAT, DLA, Cardinal Health, Owens & Minor) and w/ Govt credit card
- There are 4 JTQs currently being purchased and used by the DoD (*see table, next slide*)
- Per 07Mar14 Combat Medic TCON, JETT is the 2nd most preferred JTQ (after SAM Junctional Tourniquet)

JUNCTIONAL TQs IN THE DoD:

<i>NSN</i>	<i>DEVICE</i>	<i>IMAGE</i>
6515-01-616-5841	Junctional Emergency Treatment Tool (JETT)	 A black, compact, and portable medical device with a white label on the side, designed for emergency treatment at junctional points.
6515-01-589-9135	Combat Ready Clamp (CROC)	 A metal clamp with a white handle and a brown strap, used for securing medical equipment.
6515-01-618-7475	SAM Junctional Tourniquet	 A black, rectangular device with two circular ports and a blue pump, used for applying a tourniquet to junctional points.
6515-01-616-4999	Abdominal Aortic Tourniquet (AAT/AAJT)	 A black, wide, and flexible device with a white handle and a black strap, used for applying a tourniquet to the abdominal aorta.

SUMMARY:

- JTQs, including the JETT™, are utilized to control the difficult inguinal bleeding common in high extremity thigh/groin wounds
- Four different JTQs are currently used by DoD
 - All are in the early stages of use; there is inadequate field data for any final conclusions
 - Anecdotal evidence suggests the need to address training and durability issues for all junctional TQs
- Report any issues encountered when using JTQs (e.g., functionality issues, breakage, etc.) to appropriate individuals per your command policy

This material is intended for educational and training purposes. If portions are extracted, the following statement must be included:

“Source: Armed Forces Medical Examiner System and DHA Medical Logistics Division”

NOTES of CAUTION:

- The clinical circumstances and details surrounding emergency treatment in these cases are unknown
- This presentation makes no association between device use and outcome of treatment
- This case is drawn from cases with fatal injuries, which may skew data or interpretation

For FT2F Comments / Questions / Requests:
Contact the Armed Forces Medical
Examiner System (AFMES)

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