

DAMAGE CONTROL SURGERY IN THE EMERGENCY DEPARTMENT: PLAYING TO IMPROVE TRAUMA TEAM KNOWLEDGE ?



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BACKGROUND

Trauma patients reaching the Emergency Department in critical conditions are increasing, thanks to pre-hospitals system evolution. **Preventable deaths, mainly from haemorrhagic causes**, account for up to 30% of casualties[1] and it's estimated that 10% of major trauma patients might **benefit from damage control surgery** manoeuvres (DCS). **Training with simulation** seems to play an important role in reducing preventable deaths, **improving trauma team performances**[2],[3]. Yet, achievement of animal or cadaver models is complex and expensive.

METHODS

We aimed to investigate the efficacy of a practical training on **resuscitative thoracotomy** and **pre-peritoneal pelvic packing** using a specially designed mannequin (IntubatiEM). During a **three days trauma course**, medical residents were tutored by an experienced trauma surgeon in dedicated scenarios. After that, they were asked to fill a **12 questions survey in a 1-10 scale**. We considered scores 8-10 as good, 6-7 as sufficient, and 1-5 as insufficient.

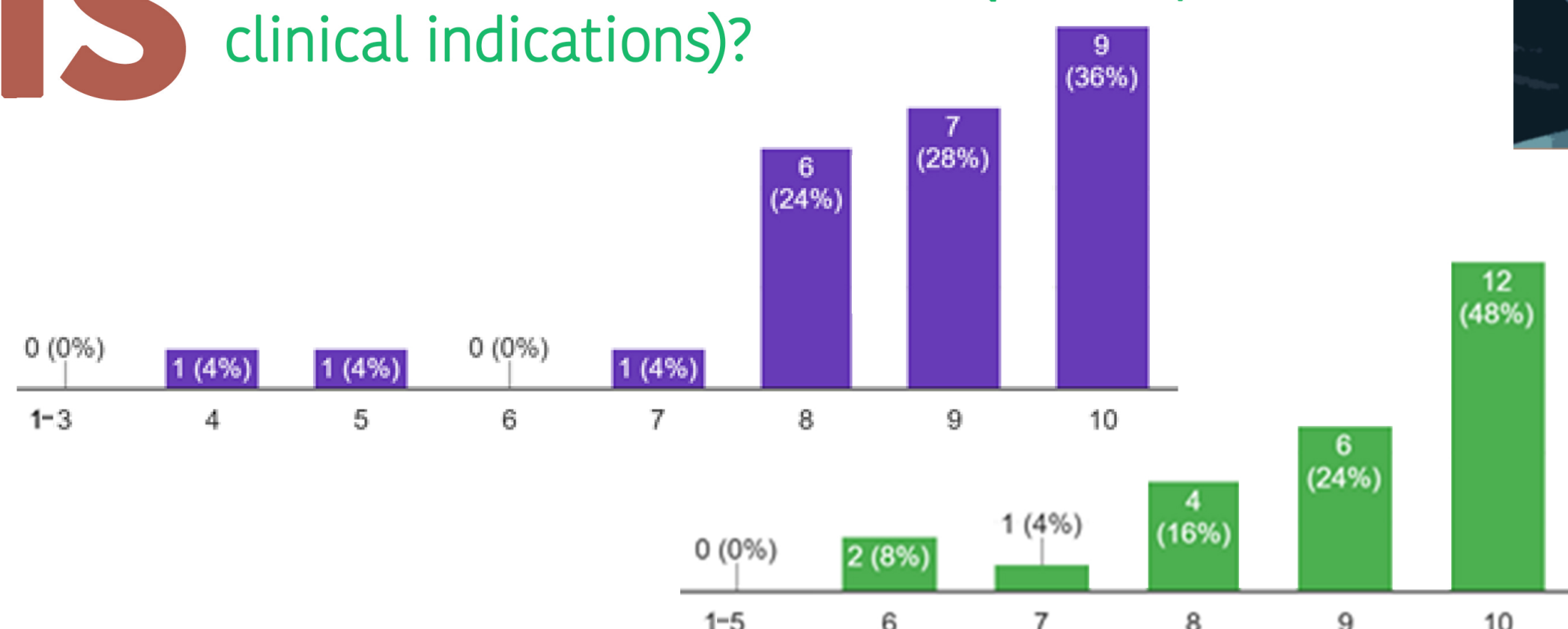
RESULTS

Out of **50 participants**, half completed the survey. Most residents were from anaesthesia, **12% orthopedics, 12% emergency medicine and 8% from emergency surgery**. Almost all participants **reported inadequate knowledge of DCS procedures before** the course. Even if 72% considered important a frontal lesson before practical training, most of them considered simulation as mandatory and effective to develop both **technical and non-technical skills**. In particular, they considered that our dedicated mannequin, simulating anatomical structures in realistic way, is a **good compromise if an animal model is not available**. **All of the participants suggested that all trauma team members, not only the surgeons, should be periodically trained** on DCS procedures.

ANALYSIS

From 1 to 10, how important do you think it is to use a dedicated mannequin, like the one used in the course, to learn the DCS maneuvers?

From 1 to 10, how useful do you think it is that all the members of the Trauma Team, and not just the surgeon, know the DCS maneuvers (technique and clinical indications)?



Our high fidelity **simulation seems to be effective** to get learners familiar with the **rare, but life-saving and high skill DCS manoeuvres**. Hopefully, continuous hands on and relatively economic **simulations will allow an improvement of team performance** and major trauma survival in the long run.



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CONCLUSIONS

