POSTERS • PO20

Pelvic Binder Application: Classic Teaching Method vs Video-Based Learning

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Afiliação
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ABSTRACT

Introduction and Goal: The correct placement of the pelvic binder is a life-saving skill, albeit rarely taught.[1] The change in the teaching paradigm due to the global pandemic, gives us the perfect opportunity to create new teaching tools. Our goal was to create a multimedia teaching tool on the proper way to place a pelvic binder and assess, using a newly developed score (Figure 1)[2,3], this resource demonstrating its non-inferiority when compared to the classic teaching method.

Material and Methods: We designed an observational study comparing classic over video-based teaching of pelvic binder placement skill. Sixteen subjects were enrolled in and completed the study and were divided between the control and study group, in a randomized way. An objective structured assessment of technical skills (OSAT) was designed and three blinded reviewers rated the performance. Inter-rater reliability was measured with the Intraclass Correlation Coefficient. Results from the control group (CG) vs the study group (SG) were compared using the Mann-Whitney test. Both groups were recorded and evaluated by three external observers, in a blind-sided fashion.

Results and Discussion: There was moderate inter-observer reliability (ICC=0,737; p<0,05). The scores in study group were significantly better than in the control group (p<0,05) (Table 1 and 2).

Our study showed the viability of video-based skill teaching method, confirming this as a valid alternative to the more classical lecture-based teaching.

Conclusion: The multimedia teaching tool produced in the scope of this study showed to be superior to the classic teaching method. Also, in order to assess the pelvic binder placement skill performances, we developed a novel objective assessment tool, with moderate inter-rater reliability.

REFERENCES

1. Naseem H, Nesbitt PD, Sprott DC, Clayson A. An assessment of pelvic binder placement at a UK major trauma centre. Ann R Coll Surg Engl. 2018;100(2):101–5.
2. O'Connor HM, McGraw RC. Clinical skills training: Developing objective assessment instruments. Med Educ. 1997;31:359–63.
3. The European Trauma Course. In 2008. p. 96–106.

	yes	no
Recognizes the **indication** for pelvic binder placement (unstable pelvic fratures): ● Evident pelvic deformation; ● Mechanism of action with significant kinetics ● Hemodynamic instability without evident cause (eg. exsanguinating hemorrhage)	☐	☐
Asks for help to place the inferior limbs in **adduction and internal rotation**	☐	☐
Insert the pelvic binder under the popliteal fossa	☐	☐
Slide the strap, in zigzags, with help, under the victim	☐	☐
center the strap at the level of the **greater trochanter**	☐	☐
Recognizes the **5 P's** and intervenes on them:	-	-
● checks the **pulses**	☐	☐
● checks the **pockets**	☐	☐
● removes the **penis** from the area where the strap is going to be applied (*n/a if the victim is female)	☐	☐
● warns the patient about the **pain** (if conscious) and asks to administer an analgesic	☐	☐
Adjust the strip in buckle and pull the strap horizontally with the help of the assistant's counter-traction until heard the **1st click**	☐	☐
Hear the **2nd click**, keep the tension while sticking the strap on the velcro	☐	☐
● checks again the **pulses**	☐	☐
Total:	x/12	-

Figure 1. Objective Assessment Tool developed for rating pelvic binder skill acquisition

Table 2 and 3. Comparison between the control group (CG - medical students exposed to lecture and practical session on pelvic binder placement) vs study group (SG - medical students exposed to multimedia content and practical session on pelvic binder placement

	Group	N	Mean Rank
	CG	24	22,50
Observations	SG	24	**26,50**
	Total	48	-

Table 2.

	Observations
Mann-Whitney U	240
Asymp. Sig. (2-tailed)	**0,039**

Table 3.