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DISSECTION-BASED VS. INTERNET-BASED PELVIC ANATOMY EDUCATION FOR 3RD YEAR MEDICAL STUDENTS

Hypothesis / aims of study
To compare an internet-based anatomy module with traditional methods taught to the 3rd year medical students.

Study design, materials and methods
During 2008-2009, pelvic anatomy was taught to 3rd year medical students using dissection-based (DB) methods. This module was composed of 30 minutes of a lecture with PowerPoint, 30 minutes of anatomy videos, 30 minutes of dissection lab, and a post-test at the conclusion. The same course material and the power point presentations used were converted to digital format and taught as an internet-based (IB) module without inclusion of a dissection lab, but with a pre and a post-test. The 30 minutes of anatomy video and test questions were designed to address: pelvic anatomy, including the perineal muscles and neurovasculature and multiple views of the levator ani muscle, pelvic organs, and pelvic neurovasculature. We assessed pre- and post-test within the IB group and compared the post-tests between DB and IB groups.

Results
In the IB training group, the mean score for the nine learning objectives were significantly increased after training except for the Internal Anatomy objective, which was not significantly different between the IB group pre-test and post-test scores were 1.97± 0.186 vs 1.97± 0.200 (P: 0.866) respectively. Post-test comparison between DB and IB groups revealed significantly (P<0.0001) higher mean score for the IB group in all learning objectives except Internal Anatomy (P= 0.431).

Interpretation of results
Internet-based education significantly improved students` score.

Concluding message
Conclusion: 3rd year medical students demonstrate higher pelvic floor anatomy scores after completing an internet-based module compared to a traditional dissection based course.

Table 1. Comparison of quiz scores for nine domains between IB and DB groups at Pre- and Post- training course

Domain	Score	IB Pre-Test	IB Post-Test	DB Post-Test	p1	p2
External anatomy	9	6.63 ± 1.67	8.84 ± 0.67	7.54 ± 1.33	<0.0001	<0.0001
Internal anatomy	3	1.97 ± 0.18	1.97 ± 0.20	1.92 ± 0.71	0.866	0.431
Perineal muscles	7	6.11 ± 1.01	6.84 ± 0.55	4.03 ± 1.90	<0.0001	<0.0001
Perineal neurovasculature	4	3.47 ± 0.77	3.73 ± 0.59	1.46 ± 1.09	<0.0001	<0.0001
Levator ani caudad view	3	1.71 ± 0.93	2.81 ± 0.53	1.39 ± 1.25	<0.0001	<0.0001
Lateral view of organs	5	4.92 ± 0.30	4.96 ± 0.33	4.72 ± 0.60	0.039	<0.0001
Lateral view of vasculature	8	5.35 ± 2.13	6.98 ± 1.27	4.52 ± 1.92	<0.0001	<0.0001
Cephalad view of internal organs	4	3.41 ± 0.58	3.84 ± 0.42	3.63 ± 0.56	<0.0001	<0.0001
Cephalad view of pelvic nerves	2	1.95 ± 0.23	1.99 ± 0.14	0.80 ± 0.78	<0.0001	<0.0001
Levator Ani cephalad view	3	1.97 ± 1.05	2.84 ± 0.47	1.37 ± 1.25	<0.0001	<0.0001
Total score	48	37.47 ± 5.46	45.86 ± 2.10	31.58 ± 6.72	<0.0001	<0.0001

IB: Internet-based
DB: Dissection-based
p1: p value for internet-based training pre-test vs. post-test scores
p2: p value for internet-based training post-test vs. dissection-based post-test scores
All data are presented in Mean ± SD

Disclosures
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