

Face and content validity assessment of a novel post-thyroidectomy haematoma simulation model

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Abstract

Abstract Objectives The objective of this paper is to describe a novel post-thyroidectomy haematoma simulator and present data on its face and content validity and curriculum applicability. **Methods** A simple simulation model of a post-thyroidectomy haematoma was made using a C-spine collar, silicone sheets and thickened jelly. The model was worn by a simulated patient in a hybrid simulation. A prospective evaluation study was performed. Medical, nursing and theatre staff were recruited to complete a simulation using the model. All participants completed a 16-item questionnaire using a 5-point Likert scale to assess the following: face validity (FV), content validity (CV), task-specific validity (TV) and curriculum applicability. Non-parametric statistics were used. **Results** 74 participants completed the questionnaire. The model achieved median face validity of 4 (interquartile range (IQR): 4-5), median content validity of 4 (IQR: 4-5) and median task-specific validity of 5 (IQR: 4-5). In 14 out of 16 domains, participants gave a score of 4 or 5 (agreed or strongly agreed) more than 80% of the time. The median score for curriculum applicability was 5 (IQR: 4-5). **Conclusions** This home-made simulator for post-thyroidectomy haematoma evacuation achieved face and content validity. It is an accessible, cheap and potentially life-saving training tool. This model may be useful for multidisciplinary simulation-based training in the light of the recent DAS, BAETS and ENT UK consensus guidelines on managing post-thyroidectomy haematoma. **Keywords:** Simulation, post-thyroidectomy haematoma, hybrid simulation, face validity, content validity **Key points:** 1. Post-thyroidectomy haematoma is a rarely encountered and potentially fatal complication of thyroid surgery. 2. No simulation models for this condition have previously been validated. 3. We developed a simple, home-made, cost-effective hybrid simulation model. 4. The model was tested at three separate training events for ENT registrars and the multidisciplinary team. Data was collected using Likert-scale questionnaires. 5. The model achieved good face and content validity.

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Domain	Item	Median	IQR	% Agree or Strongly Agree
Face Validity	Appearance	4	4-5	94.59%
	Feel	4	3-4	67.57%
	Instrument	4	4-5	97.30%
	Total	4	4-5	86.49%
Global Content	Anatomy	4	4-5	85.14%
	Planning	5	4-5	87.84%
	Technique	4	4-5	85.14%
	Hand-eye co-ordination	4	4-5	79.73%
	Overall	5	4-5	97.30%
	Total	4	4-5	87.03%
Task-specific content	Skin sutures	5	4-5	94.59%
	Muscle sutures	5	4-5	91.89%
	Haematoma evacuation	5	4-5	94.59%
	Management	5	4-5	94.59%
	Anatomy	5	4-5	93.24%
	Total	5	4-5	93.24%
Curriculum Recommendation	Transferability	5	4-5	93.15%
	Curriculum	5	4-5	93.15%
	Recommendation	5	4-5	95.89%
	Total	5	4-5	94.06%





