

INTRODUCTION:

Blunt neck trauma is relatively common, often resulting from traffic accidents. We present a rare case of trauma-induced thyrotoxicosis. Approximately 25% of laryngotracheal injuries may initially present without physical findings, necessitating a high index of suspicion[1]. Although Malaysian law mandates helmet use for both motorcyclists and pillion riders, improper helmet use may paradoxically contribute to severe injury.

CASE DESCRIPTION:

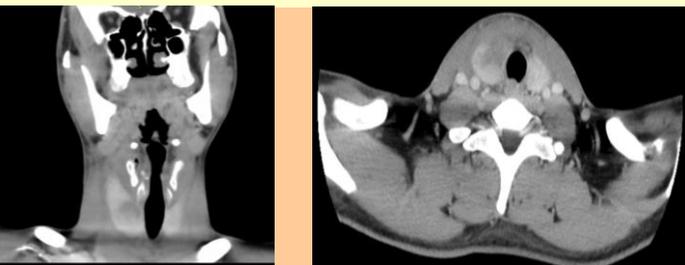
A 25-year-old Malay male was involved in a motorcycle-car collision. During the accident, his helmet strap slipped backward, causing indirect force to the anterior neck. He presented with anterior neck pain and odynophagia. He was hemodynamically stable without signs of airway compromise. Physical examination revealed anterior neck swelling and tenderness, without tracheal deviation or subcutaneous emphysema. Flexible nasoendoscopy showed medialisation of the right lateral pharyngeal wall. CT imaging revealed multiple fractures and dislocations of laryngeal bones and cartilages, a thyroid gland hematoma, and an anterior neck hematoma. Laboratory results demonstrated persistently low TSH levels with high FT4.

DISCUSSION:

Isolated thyroid gland injury resulting from blunt neck trauma is rare, and trauma-induced thyrotoxicosis is even more uncommon. The neck's anatomy contains many vital structures, and symptoms of serious injury may manifest anywhere from 60 minutes to over 24 hours post-trauma. Airway management follows ATLS principles. Trauma-induced thyrotoxicosis occurs due to rupture of thyroid acini, releasing preformed thyroid hormones into the circulation[2]. Thyroid function should be serially monitored, as thyroiditis from trauma typically follows a triphasic course (hyperthyroid, hypothyroid, then recovery). In Malaysia, motorcycles are a primary mode of transportation. While helmet use reduces fatalities, its protective capacity depends on proper design and correct usage. Improperly fastened helmets may pose a risk for indirect neck trauma.

CONCLUSION:

Motorcycle-related neck injuries often result from indirect forces such as hyperextension or sudden neck stress rather than direct impact. Trauma-induced thyrotoxicosis requires a high index of suspicion, especially in riders presenting with anterior neck symptoms and evidence of thyroid gland involvement.



Hypodense area with ill defined margin at the right thyroid lobe, 1.6cm x 1.4cm. Hypodense area at the isthmus of the thyroid gland. Left thyroid lobe is preserved. Soft tissue thickening at the anterior aspect of the neck at the level of thyroid gland. Generalized thickening of the bilateral sternohyoid and thyrothyroid muscles

Profile: TFI

	25088437	25010720	25001093	24217994
	05/06/2025 15:05:29	14/01/2025 15:40:22	03/01/2025 15:21:55	30/12/2024 03:20:04
Thyroid Stimulating Hormone (TSH)	0.010 (L)	<0.01 (L)	<0.01 (L)	<0.01 (L)
Thyroxine Free (Free T4)	67.80 (H)	29.20 (H)	42.80 (H)	52.30 (H)

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