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TRAUMATIC BRAIN INJURY PATTERNS ON CT SCAN: A COMPARISON OF MOTORCYCLIST VERSUS PASSENGER VEHICLE PATIENTS INVOLVED IN ROAD TRAFFIC ACCIDENTS

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Introduction: Traumatic brain injury following road traffic accidents is a common cause of morbidity and mortality in Malaysia. We aim to determine the differences of traumatic brain injury patterns based on CT findings among motorcyclist versus passenger vehicle patients involved in road traffic accidents.

Materials and method: This retrospective study was conducted in Hospital Tengku Ampuan Afzan (HTAA), Kuantan, Pahang. A total of 100 CT scan brains of patients who were involved in road traffic accidents were retrieved and reviewed, 50 of them were motorcyclists and the other 50 were passenger vehicles.

Results: Fifty percent of the motorcyclists had an abnormal CT brain finding while only 24% of the passenger vehicle showed abnormal finding. Among motorcyclist, skull fracture was the most common finding (30%) followed by subdural hemorrhage (28%). Among passenger vehicle, the most common finding was subdural hemorrhage (10%) followed by subarachnoid hemorrhage, intraparenchymal haemorrhage and skull fracture (8% each). The motorcyclist had significantly higher rate of subdural haemorrhage, extradural haemorrhage, intraparenchymal contusion and skull fracture compared to passenger vehicle patients with p value of 0.02, 0.03, 0.007 and 0.005 respectively.

Conclusion: The occurrence of traumatic brain injury was significantly higher among the motorcyclist compared to passenger vehicle patients involved in road traffic accidents. The findings of this study highlighted the need for taking further measures to increase safety among the motorcyclists.