Correspondence

Cough syncope in Heavy Goods Vehicle drivers

Sir,

We have recently become aware of four cases of serious road traffic accidents involving Heavy Goods Vehicle (HGV) drivers, all of whom avoided prosecution from dangerous driving based upon medico-legal reports supporting the diagnosis of cough syncope.

One case resulted in the death of two pedestrians. The three other cases involved head-on collisions, two of which resulted in the death of the car drivers involved, one of which resulted in serious injury. All denied previous syncopal episodes with coughing. The accounts given from each of the HGV drivers remained consistent from the time immediately following the accident.

The alternative diagnosis of falling asleep at the wheel, secondary to obstructive sleep apnoea, was considered in each case. The classic descriptions of cough syncope from accounts given by the HGV drivers immediately following the incident were felt to be diagnostic and sleep studies were therefore not requested by the physicians.

Cough syncope is readily recognizable; syncope follows a series of coughs, or even a single cough. Syncope is generally brief, lasting only seconds and recovery is rapid. We could find only two previous reports of fatal road traffic accidents within the English literature.\(^4,6\) The original descriptions almost exclusively implicated male, middle-aged and overweight chronic bronchitic smokers. There is only one publication in the English literature to follow up a series of cases with cough syncope.\(^1\) Of 45 cases, 43 were male, average age 52, mean weight 96 kg, smoking was implicated in 82\%, obstructive lung disease in 86\%. Nearly all had pre-syncopal symptoms associated with coughing, but loss of consciousness was rare. They recognized that treatment, in particular stopping smoking, alleviated symptoms in nearly all patients. The occurrence in young asthmatics of both sexes is also now well recognized.\(^3\)

Cough syncope was first described by Charcot in 1876\(^2\) using the term laryngeal spasm, but confusion regarding its underlying mechanism has remained until recently. Work by Mattle et al.\(^5\) measuring intracerebral blood flow using the technique of trans-cranial doppler demonstrated that cerebral blood flow can stop and even reverse during a cough in susceptible patients, yet mean arterial pressure does not significantly change. During coughing there is an increase in thoracic and abdominal pressures; this is transmitted via the great veins to the cranial cavity. Intracerebral blood flow is determined by the difference between arterial blood pressure and intracranial cranial pressure. In susceptible patients, syncope occurs when cerebral blood flow is temporarily halted.

Cough syncope has important implications for fitness to drive. The DVLA recently updated its guidelines on syncope and unexplained loss of consciousness. Guidelines can be found at [www.dvla.gov.uk/at_a_glance/content.htm]. These do not specifically address the issue of situational or provoked syncope, as most of these (such as micturition syncope) are unlikely to occur while driving. The recently introduced guidelines on syncope are as follows: normal licence holders should stop driving until liability to attacks has been successfully controlled, confirmed by a medical opinion. HGV licence holders must cease driving. If there is any chronic lung condition and/or a significant history of smoking they will need to be free of syncope/presyncope attacks for ten years, similar to guidelines for epilepsy.

Cough syncope in drivers can have tragic consequences; driving regulations are different for patients suffering vasovagal or cardiogenic syncope. The profession must recognize the need to counsel patients appropriately.

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References


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