Review

Citation: Kodikara S, Izzath A & Wijerathna S, et al., 2021. Novel tools for assessment of drunken driving: Are they legal within the Sri Lankan jurisdiction?. Sri Lanka Journal of Medicine, 30(1), pp 90-93
DOI: <http://doi.org/10.4038/sljm.v30i1.233>

Novel Tools for Assessment of Drunken Driving: Are They Legal Within the Sri Lankan Jurisdiction?

Kodikara S^{1*}, Izzath A², Wijerathna S³, Jayasooriya P⁴ & Kudagama M⁵

¹ MBBS, DLM, MD; Professor of Forensic Medicine, University of Peradeniya, Peradeniya, Sri Lanka.

² Fellow in Victorian Institute of Forensic Medicine, Australia.

³ MBBS, DLM, MD; Consultant Judicial Medical Officer, Teaching Hospital, Kandy, Sri Lanka.

⁴ MBBS, DLM, MD; Consultant Judicial Medical Officer, Base Hospital, Mahiyanganaya, Sri Lanka.

⁵ MBBS, DLM, MD; Consultant Judicial Medical Officer, Teaching Hospital, Rathnapura, Sri Lanka.

Correspondence: S.Kodikara

Department of Forensic Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka, 20400

Email: kaskodikara@yahoo.com

<https://orcid.org/0000-0002-3790-0489>

Abstract

Digital breathalyzer and the saliva alcohol test have become modern tools to detect drunken driving and widely used by forensic physicians in teaching and general hospitals in Sri Lanka. This paper appraises the legal validity of the digital breathalyzer and the saliva alcohol test within the Sri Lankan Jurisdiction. Saliva alcohol test is noninvasive, on the spot screen test, which gives quantitative results in fewer than five minutes using a saliva sample. Digital breathalyzer is also a reliable tool to detect high, moderate and low alcohol intake. Both these tests have been approved and certified by worldwide organizations and have received international recognition. Their usage has been validated in many other jurisdictions. However, according to the Motor Traffic Act of Sri Lanka, the breath test for alcohol shall be carried out by a police officer. Therefore, opinions framed by forensic physicians for the cases of drunken driving by means of the digital breathalyzer, is contrary with the current law of the country. Neither the binding judgement of *Nalinda Kumara Vs Officer-In-Charge of Police, Kandy* nor the Motor Traffic Act of Sri Lanka speak about an assessment of blood alcohol level using saliva. Therefore, using saliva alcohol test and framing opinions on it has no legality and could be challenged in a court of law. Considering the importance of these novel tools for a fair administration of justice, its validation should be done by amending the Motor Traffic Act of Sri Lanka and related regulations, without any delay.

Keywords: alcohol, drunken driving, Sri Lanka, digital breathalyzer, saliva alcohol test

INTRODUCTION

Drunken driving is a common legal and medicolegal issue arising from the motor traffic law of Sri Lanka. The penalties namely; fine up to rupees 150,000, imprisonment up to a period of 10 years and suspension of the driving license, imposed on this offence have attracted a special prominence to this law than other legislations.

Forensic physician assists the justice system by expressing an opinion to the fact that, whether the alleged driver in a case of drunken driving, consumed alcohol or not, through clinical forensic examination. Taking into consideration the harshness of the punishment for this offence, the forensic physician should tremendously be cautious in delivering such opinion through clinical forensic examination. Furthermore, nowadays there are novel testing methods used in this context, replacing the highly subjective clinical forensic examination. However, irrespective of having worldwide accepted scientific authentication, expressing opinions using novel testing methods, which are not validated yet within the current legal framework of Sri Lanka, could be challenged in a court of law.

Novel tools for testing drunken driving

Digital breathalyzer and the saliva alcohol test (SAT) by means of quantitative ethanol detector (QED) have become modern tools to detect consumption of alcohol in drunken driving. SAT is noninvasive, on the spot screen test, which gives quantitative results in fewer than five minutes using a saliva sample [1]. It takes less than 20 seconds to show the color change when the ethyl alcohol concentration is greater than 0.02% [2]. This test has the recognition of Clinical Laboratories Improvement Amendments (CLIA), Food and Drug Agency (FDA), Health Canada and Department of Transportation (DOT) of the United States [1].

Digital breathalyzer is also a reliable tool to detect high, moderate and low alcohol intake and has been approved and certified by worldwide organizations such as European Conformity, United Kingdom Home Office, FDA, and DOT [3],[4].

Current law in Sri Lanka in respect of using breathalyzers to assess drunken driving

According to the sub-section 1 of the section 151 of Motor Traffic Act of Sri Lanka, 'No person shall drive a motor vehicle on a highway after he has consumed alcohol or any drug'. Hence the opinion of the forensic physician to the fact that the driver has 'consumed' alcohol is sufficient to bring a charge, prosecute and convict, in a court of law [5].

Subsection 1(c) (a) of this act states that 'Where a police officer suspects that the driver of a motor vehicle on highway has consumed alcohol he may require such person to submit himself immediately to a breath test for alcohol or an examination by a government medical officer in order to ascertain whether such person has consumed alcohol.

Subsection 1(D) (iii) of this act states that 'Regulations may be made prescribing the mode and manner in which any examination may be conducted to ascertain whether a driver of a motor vehicle has consumed alcohol'.

Accordingly, 'Motor Traffic (Alcohol and Drugs) Regulations, 1979' were made and published [6]. These regulations specify how the breath test should be carried out. As per these regulations, the breath test for alcohol shall be carried out by a police officer by means of a device approved for the purpose by the inspector general of police.

Current law in Sri Lanka in respect of using saliva to assess drunken driving

In the case of *Nalinda Kumara Vs Officer-In-Charge of Police, Kandy*, Supreme Court decided that it has to be clearly established that the person charged had consumed alcohol to the limit 80 mg/dL of blood which can be established only by carrying out the breathalyzer test or by carrying out a blood

test of the person [7]. The Motor Traffic Act of Sri Lanka is silent in using body fluids for assessment of drunkenness in drunken driving.

Using digital breathalyzer in order to assess drunken driving

Digital breathalyzers used by forensic physicians in Sri Lanka have not been approved by the inspector general of police. According to the above-mentioned law, the breath test for alcohol, shall be carried out by a police officer by means of a device approved for the purpose by the inspector general of police. Therefore, opinions framed by forensic physicians for the cases of drunken driving by means of the digital breathalyzer, irrespective of how excellence of its end results and the authenticity, is contrary with the current law of the country.

Using SAT by means of QED in order to assess drunken driving

SAT by means of QED has now been made widely available and used in general and teaching hospitals of Sri Lanka in order to assess drinking and driving. SAT strip contains tetramethylbenzidine, alcohol oxidase, peroxidase and proteins. The SAT strip is based on the high specificity of alcohol oxidase for ethyl alcohol in the presence of peroxidase and enzyme substrate such as tetramethylbenzidine [2]. With the presence of ethyl alcohol, a color change occurs in tetramethylbenzidine and it quantifies the alcohol level.

However, neither the binding judgement of *Nalinda Kumara Vs Officer-In-Charge of Police, Kandy* nor the Motor Traffic Act of Sri Lanka speaks about an assessment of blood alcohol level using saliva [7].

Thus, the SAT is not validated within the legal framework of Sri Lanka. Therefore, using SAT and framing opinions on it has no legality and could be challenged in a court of law.

CONCLUSION

Though novel methods are available for medico-legal assessment of consumption of alcohol and are used in Sri Lanka in cases of drunken driving, they are not validated by Sri Lankan law. Considering the importance of these tools for a fair administration of justice, its validation should be done by amending the Motor Traffic Act of Sri Lanka and related regulations without any delay.

Author declaration

Acknowledgements

Keerthi Premasiri, Sameera Jayasinghe & Samantha Karunathilaka

Author Contributions

Kodikara I. Initial conception, drafted the manuscript
Izzath A. Revised & edited the manuscript
Wijerathna S. Revised & edited the manuscript
Jayasooriya P. Revised & edited the manuscript
Kudagama M. Revised & edited the manuscript

Funding sources

None

Availability of data and materials

Not relevant

Ethics approval and consent to participate

Not relevant as it is a review article & does not involve human/animal subjects

Competing interests

None

REFERENCES

1. QED Alcohol Saliva Test Kit. Confirm Biosciences, 2020. [cited on June 1, 2020] Available from: <https://www.confirmbiosciences.com/products/saliva-drug-tests/qed-saliva-alcohol-test/>
2. Thokala MR, Dorankula SPR, Muddana K, Velidandla SR. Alcohol saliva strip test. Journal of Clinical and Diagnostic Research 2014; **8**(3):307. Available from: <https://doi.org/10.7860/JCDR/2014/8164.4177>
3. Skipper GE, Thon N, DuPont RL, Campbell MD, Weinmann W, Wurst F.M. Cellular photo digital breathalyzer for monitoring alcohol use: a pilot study. European Addiction Research 2014; **20**(3):137-142. Available from: <https://doi.org/10.1159/000355834>
4. Breathalyzer Product Approvals. Alco digital. Alco Digital, 2020. [cited on June 1, 2020] Available from:

<https://www.breathalyzer.co.uk/breathalyzer-product-approvals/>

5. Motor Traffic Act of Sri Lanka, 1979. [not available online]
6. Motor Traffic (Alcohol and Drugs) Regulations, 1979. Gazette of Democratic Socialist Republic of Sri Lanka. 13th July: 25-30. [not available online]
7. Nalinda Kumara Vs Officer-In-Charge of Police, Kandy, 2007. Sri Lanka Law Reports 1: 332-345. [not available online]