

Medicolegal Aspects during Mass Casualty Due to Road Traffic Accidents in the Era of Covid: A Tertiary Care Institutional Experience

Amrish Kumar¹, Amit Chaudhary²

¹Additional Professor & HOD, Department of Vascular Surgery, King George's Medical University, Lucknow, UP, ²Assistant Professor, Vascular Surgery, King George's Medical University, Lucknow

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Abstract

Background: In March 2020, the world health organization declared COVID-19 a world wide pandemic. Countries introduced public health measures to contain and reduce its spread. The effect of mandated societal lockdown to reduce the transmission of corona virus disease 2019 (COVID-19) on road traffic accidents is not known. For this we performed an in-depth analysis singdata of emergency and trauma centre UPUMS, Saifai. As most of the manpower was involved in managing Covid patients directly or indirectly, it was a challenge to manage these mass casualty patients who require intensive care as well as Medicolegal documentation , record keeping , Consent for life saving procedures in absence of Relatives.

Materials and Methods: We reviewed data on total 2876 road traffic accident records in UPUMS, Saifai from January 1, 2020 through September 30, 2020. We treated March 20th as the first day of mandated societal lock down and 1st July as the first day of re-opening.

Results: We have found that the reis increase in road traffic accidents resulting in serious or fatal injuries during lockdown and post-lockdown period. There was increased Medicolegal burden in spite of the decreased medical resources, manpower as most of manpower and resources were being utilized for covid patients.

Conclusion: Road traffic accidents are a prominent contributor to hospitalization and may negatively impact the existing hospital resources directed towards COVID-19.

Keywords: COVID-19 Pandemic, Mass Migration, Medicolegal aspect, Road Traffic Accidents

Introduction

In December 2019 in Wuhan China, a cluster of cases of ' pneumonia of unknown origin' was reported which subsequently was confirmed (Hui et al, 2020, sohrabi et al, 2020) and named corona virus disease 2019 (COV I D 19) by the world health organization, 2020). By march 2020, the WHO declared COVID-19

a world wide pandemic with 216 countries, area or territories showing 10,719646 cases and 517, 337 death combined as of July 2, 2020 (WHO 2020).

The effect of mandated societal lockdown to reduce the transmission of corona virus disease 2019 (COVID-19) on road traffic accident has been identified as an important issue with direct

Corresponding Author: Amit Chaudhary, Assistant Professor, Vascular Surgery, King George's Medical University, Lucknow.

E-Mail: amitchaudhary@kgmcindia.edu

Mobile: 8004424674

implications for public safety (ching and Miranda-moreno, 2020)

Despite the initial expectation that road traffic accidents will decrease during the COVID-19 pandemic, the preliminary results are variable. The estimates of road traffic accidents varied between states. Shillong and walteen (2020) found a 50% reduction in total casualty collisions in California from march 1, 2020 to April 30, 2020 but some region show very little reduction.

Road traffic accidents are a prominent contributor to hospitalization and may negatively impact the existing hospital resources directed towards COVID-19.

We studied the effect of mandated societal lockdown in UPUMS, Saifai, Etawah on road traffic accidents. UPUMS, saifai is situated at Lucknow-Agra express way which is approximately 300 km road, our institute caters to most more than 150 km stretch and we receive major road traffic accidents cases almost daily and mass casualties on regular basis.

Due to constrained medical facilities & infrastructure during these covid times managing these mass casualty patients requiring treatment which included ICU care, Emergency Surgeries and above all very detailed Medicolegal documentation, record keeping as well taking consent for emergency procedure especially in absence of no known patient relatives.

Result

We reviewed data on total 2876 road traffic accident records in UPUMS, saifai from January 1, 2020 through September 30, 2020. We treated March 20th as the first day of mandated societal lockdown and 1st July as the first day of re-opening.

The total number of road traffic accidents range from 5 to 35 per day. The number of serious or fatal crashes ranged from 0 to 18 per day. Among these RTAs, 1972 were associated with minor injuries and 878 were associated with serious or fatal injuries. Overall, the total daily number of RTA patients varied from 11.5 (mean before lockdown) to 12.0 (mean during lockdown) and 12.4 (mean after lockdown).

There is increase in RTA during and post lockdown due to interstate mass movement by the labourers during and again after lockdown.

Incidence of mass casualties is increased many folds during the COVID-19 times because of mass migration, uncertainty, fear for life and rumours.

Patients were most often received in shock condition and most cases were of polytrauma type which require immediate resuscitation and then further definitive management. Many crush injury, orthopaedic injury and Vascular injury patients who needed emergency procedures, who required emergency amputations needed Detailed Consent but it was a big challenge and tricky condition to decide upon the course of treatment following the Medicolegal aspects in every step, as there was definite constraint in the manpower, unavoidable delays due to lack / decrease in the resources.

Discussion

We observed that there is increase in road traffic accidents resulting in serious or fatal injuries. There is on behind lack of reduction in RTA fatal or serious injuries during mandated societal lockdown is unclear. Potential reason includes increase speed of traffic due to lower congestion, greater number of drivers under the influence of alcohol, interstate mass migration by the labourers. The findings are based on data from RTA that occur within state of Uttar Pradesh and may not be generalizable to other states.

Medicolegal Aspects in Road Traffic Accidents mandate immediate resuscitation, most often proper history was not available, due to sudden influx of hundreds of patients in critical condition, even triaging was challenge due to decreased manpower & resources, all these patients essentially needed proper description of injury after resuscitation, most patient required multidisciplinary care as most were of poly trauma nature.

Our restructured trauma & Emergency department as well as its building during this period was functioning in such a way that patient receiving from ambulance to operative room/ICU takes only a few minutes and on the way only patient is being resuscitated, radiological investigations are performed and depending upon the condition of patient, either they

are shifted directly to Operation theatre or ICU For definitive management.

Conclusion

The mandated societal lockdown policies led to reduction in road traffic accidents resulting in minor injuries but not road traffic accidents resulting in serious or fatal injuries.

Road traffic accidents are a prominent contributor to hospitalization and may negatively impact the existing hospital resources directed towards COVID-19 they adversely affected the Medicolegal aspect of record keeping, Proper consent is almost impossible due to the excessive number of very sick patients, most often absence of patient relatives, requirement / availability of ventilator, requirement of emergency life saving procedures like tracheostomy / Amputation to save life.

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Ethical Clearance: Taken from Institutional Ethical committee

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