ANIL AGGRAWAL'S
Internet Journal of
Forensic Medicine and Toxicology
The world's first online journal devoted entirely to forensic medicine and toxicology · Published 1 January and 1 July

VOL. 1, NO. 2
Downloaded from www.anilaggrawal.com · ISSN 0972-8074 (Online) · https://www.anilaggrawal.com/ij/vol_001_no_002/theses/1/1.html

A POSTMORTEM STUDY OF ABDOMINAL AND PELVIC TRAUMA IN CENTRAL DELHI

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1. INTRODUCTION

Man, being basically an aggressive animal, the history of trauma dates back right down to the time of evolution of human kind. Since prehistoric times, the abdomino-pelvic cavity has been looked upon as one of the most vulnerable regions of the body and injuries involving it have always been considered very serious. As early as 460 BC, Hippocrates was aware of the danger to life caused by injury to liver and spleen. Penetrating and non-penetrating injuries of the abdomen and pelvis accounts for a large percentage of trauma cases. Originally, man used assault weapons like stones, clubs, spheres, axes, draggers etc. With the discovery of gunpowder in Europe in 1354, came the firearms which were far more lethal weapons. The development of science in various aspects of human life like household items, atomic energy etc have evolved far more superior, sophisticated, and lethal weapons of assault. The motorized transportation media like vehicles, trains, aeroplanes etc, with fast moving vehicular traffic, vast urbanization, rapid industrialization, changing social patterns, construction of sky scrappers and increased crime rate with added activity of terrorists, have contributed very greatly to the increase in the incidence of trauma to the human body.

In Delhi, vehicular accidents are the most common contributory factors to the abdomino-pelvic trauma because of multiplicity of vehicles, viz., power driven as well as body and hand driven running on the same road, increased density of the traffic specially in the peak hours, faulty roads, poor maintenance of the public transport vehicles etc. The vehicular accidents usually involves young people between the age group 20-40 years. Fatal accidents in this group not only represents the tragic loss to the family but also severe economic loss to the community as it entrails wastage of educational training and loss of productive years of life. Therefore, a more efficient Medicare is called for, since with the present day advancement of medical sciences; a much better prognosis than before becomes the desired aim. The official statistics shows that about 3,000 persons are killed in about 10,000 road accidents occurring in the Capital (Delhi) annually (Statesman - November 22, 1996). The number of accidents in the country has increased from 55,478 in 1960 to more than four lakhs (One Lakh in Hindi is equivalent to one-tenth of a million) in 1996. (Times of India -November 24, 1996). There have been 202 fatal road accidents in Delhi till February 9, 1997. (Times of India-March, 1, 1997). Total number of the persons killed in road accidents during 1996 in Delhi is 2091 as compared to the reported figure of 1842 in Other Metros which include Calcutta,

Chennai and Mumbai (Indian Express-March 6, 1997). Reckless driving during the first 74 days of this year has claimed 376 lives in road accidents on Delhi Roads, making it the most unsafe road network in the country (Hindustan Times - March 16, 1997).

TABLE SHOWING ROAD ACCIDENTS IN DELHI

YEAR	SIMPLE	FATAL
1991	6,414	1,651
1992	6,878	1,628
1993	6,815	1,686
1994	7,260	1,790
1995	7,216	2,003

(Delhi Times-Times of India-25th October 1996).

Penetrating injuries to abdomen and pelvis are caused by firearms and stab injuries. In our country, stab injuries are more common than bullet injuries and involved organs are usually the vital areas, viz., head, precordial region or abdomen. The firearm injuries cause far more associated injuries which accentuate the mortality.

Since the abdomino-pelvic cavity contains the vital organs like liver, spleen, kidney, stomach, intestines etc, trauma to this region challenges the integrity and even the viability of the individual. Because of its size and anatomical position, it is a major site of trauma in road accidents. Even with the improvement in safety measures in vehicles and greater availability of state of art resuscitative measures, the mortality rate in crush injuries to the abdomino-pelvic region has not declined.

Injuries to the abdomen and pelvis are not always isolated but often associated with injuries to other parts, viz., head, chest, spine, extremities etc. Hence, the presence of intra-abdominal and intra-pelvic involvement may be overlooked or discovered later. Early recognition of the injury and immediate treatment are mandatory in saving the lives of many of these patients. Repeated clinical examinations and observations for the appearance of clinical signs and symptoms in persons with abdominal and/or pelvic injuries are more important than any other investigation.

Majority of deaths of trauma victims have medico-legal implications. It is therefore necessary to establish the cause of death to get compensation from the State or from insurance companies. Despite significant social impact of trauma, few reliable epidemiological data are available for the study of trauma in India. The lack of data concerning abdomino-pelvic trauma reflects this deficiency. Hence, we in the Department of Forensic Medicine, Maulana Azad Medical College and Associated Hospitals, New Delhi, have undertaken to study the pattern of abdomino-pelvic injuries in trauma cases occurring in Central Delhi and have come for Medico-legal Postmortem in the mortuary of the Department. We would try to establish relationship between the extent, nature and type of abdomino-pelvic injuries and other injuries to fatality, survival time, age, sex, socio-economic status, type of trauma involved and the pattern of injuries from the autopsy findings so as to widen the knowledge of the medical faculty in the field of early diagnosis and management of such injuries. Based on our findings, we would try to suggest various measures to minimize and control such injuries. It will also emphasis the need for establishment of Trauma Centers where facilities for resuscitation at the site of injury, rapid transport from the accident site to the hospital etc, will be provided. These centers will provide better coordination of resuscitative and

therapeutic management of trauma victims with the advanced noninvasive techniques of prompt diagnosis.

In keeping with this need, it was decided at the three day International Conference on Trauma and Critical Care Organized jointly by All India Institute of Medical Sciences (AIIMS) and Apollo Hospital on November 23, 1996, to set up 90-bed Trauma Center at Raj Nagar, South Delhi. It is felt that such postmortem study of the accidental injuries of abdomen and pelvis will be helpful in instituting proper preventive measures according to clinical priority.