SHOCK - THE NEGLECTED KILLER

Thousands of people are dying or disabled this very moment from shock received in accidents at home, at work, at play, on the highway, in the air, on water, or on a battlefield, although their injuries are mendable and in many instances minor.

Millions of other men, women and childred are suffering from results of continuing shock conditions received in many different injuries althought their injuries have long since healed.

Shock is one of the greatest killers and disablers known to man yet, until recently it was the most neglected and little was known about this condition that accompanies any injury to our internal system. Accident victims are treated mostly for their physical injuries and little is done about the victims state of shock. That is why in disasters many victims die because they cannot be treated for shock as well as injury.

Today a medical research group of international doctors headed by Dr. R Adams Cowley, prominent open heart surgeon, at the University of Maryland Hospital, Baltimore, is finding answers that can save millions of lives. Recently, he made a report to the Committee on Trauma and Shock, Division of Medical Sciences, National Academy of Sciences on the studies to date and recommendations for meeting this deadly challenge.

This research is based on the known fact that a person receiving injury also undergoes shock to his physical organism that is many instances complicates the injury. Study has shown that if the victim is promptly treated for both shock

and injury, the possibilities of recovery are greatly enhanced and aftermath complications can be almost eliminated. This means capable first aid at the scene of the accident, fast, smooth transportation to emergency medical treatment, and expert follow up treatment for both shock and physical injuries.

Already this knowledge is being used in handling wounded and injured soldiers in Cietnam with tremendous success in the saving of lives, and some states and cities are interested in meeting this challenge. However, a great dean of research still has to be done, according to Dr. Cowley, and neither federal, state, or city governments, or industry, have fully awakened to the challenge of this killer disease.

All funds for research, for instance, come from military sources although almost 10 million persons were disabled by accidents in 1962. In addition 97,000 died from accidental injuries, auto accidents killed 41,000 and disabled 1 1/2 million persons, 14,000 died in industrial accidents, 28,500 died of home injuries and 4 1/2 million suffered disabling injuries in the home.

With adequate funds for research in each of these areas a great many of these lives could be saved and the heavy manpower from disability greatly reduced, Dr. Cowley believes. This investment in human lives would be repaid a hundred-fold bu substantially reducing the $10 billion annual economic loss that results from accidents. In work accidents alone, total production time lost was 235 million mandays for a total cost of $5 billion in one year.

When we realize that accidents are the greatest killers of young people in their most active and productive years, 36 and under, and they suffer the most violent injuries which create shock, it is easy to understand the vital importance of speeding up shock research and having this knowledge in the hands of all first

first aid persons, police, and firemen, doctors and medical centers as soon as possible.

As Dr. Cowley points out, "Injury is more than a crushed leg, a broken bone, ruptured spleen, or smashed pelvis. These are the obvious results of accidents. Doctors know them. They are the daily experience of an emergency room staff."

"Injury is more. Injury has an impact on the physical organism on the whole. It shows itself primarily in the inability of the injured individual to maintain adequate circulation of blood. Certain symptoms appear. They add up to what we commonly call a state of shock; extreme pallor, depressed pulse and blood pressure, subnormal temperature, rapid shallow breathing."

"In all this doctors are aware of a mystifying fact. Not every injury, not even a most serious injury, inevitably causes death. Recovery is frequently possible. Grievious damage to tissues can be repaired. And yet, injured patients continue to die in great numbers. They die, it would seem, because in the shock state the body cannot make adequate use if its biochemical reserves. Conditions of shock have been induced in animals without presence of injury and death has followed, leading researchers to conclude that the injury itself is only a remote cause of death."

Shock produces the condition that appear to be fatal to its victims. The patient in shock is already near death. That is the reality doctors face. What does it mean? Doctors are unsure. They know that injured persons die of shock when they are being treated for injuries that produced the shock. Up to the present they know little more but the medical researchers at the University of Maryland Hospital are making progress. In cooperation with the U.S. Army, they have devised a program built a pilot clinical shock unit for the simultaneous treatment and study of the patient

in shock.

They have also developed a remarkable new medical technique called hyperbaric oxygen therapy - OHP. This technique involves saturating the blood with oxygen under several times normal atmosphere pressure, to supply it directly to the tissues where it is stored. In this way, the patient in shock from hemorrhage or other causes, can get the life saving oxygen which his blood with its circulation inhibited, is failing to deliver.

A research OHP chamber, large enough to accommodate a full surgical team and equipment and designed to permit surgery under high atmospheric pressure, is ready for use by the research team.

To adequately carry on this work however, Dr. Cowley and his team needs and have planned a SHOCK TRAUMA CENTER with the most modern research, laboratory, clinical and training facilities, where research, information and training can be carried on simultaneously. This would be the center of shock research and training for the U.S. to which cities and industries would send their medical staff for indoctrination and training in the treatment of shock.

This center will have an alert system with the Baltimore police and fire departments and voluntary ambulance and emergency groups. The alert will mobilize necessary personnel by the time a patient reaches the center hospital where the shock unit and its laboratories will be open 24 hours a day.

In this way the center will be an indispensable training ground for medical and basic science fellows and for military officers, thus creating an experiences pool of doctors trained in shock treatment and available for service during both civilian and war time mass disasters.

In the case of a nuclear war, shock would be prevalent and taking care of

the injuried, particularly those in shock by those with knowledge of shock will be vital to national survival, Dr. Cowley points out.

Leading Questions

1. Value of seat belts in accidents?
2. Rural accidents?
3. Are our ambulance services adequate today?
4. The lay man's definition of shock compared to the physician's?
5. How much money is being spent on this problem?