Every day in Germany, tens of thousands of people of all ages suffer a trauma—a physical or mental injury. If the victim is to survive and be secured, it is essential to have a professional ambulance service that can ensure that the victim is delivered to the hospital that can provide the best and most rapid care. The Ulm Trauma Network is a certified national trauma centre for severe injuries.

Injuries in traffic, work or other violent events are the principle cause of events in young people under 45. Within minutes of a severe injury, the human organism develops a very complex inflammatory reaction. The precise mechanisms are still poorly understood. The Ulm scientists are working intensively to clarify the risk response.

Back into life—The stations of optimal care

1. Trauma

2. Patient

Within the first hour after a trauma, modern imaging procedures are used to clarify injury patterns and life-saving measures are performed. The functions of the organs and of the immune system are then monitored; this is another focus of the research in Ulm.

3. Emergency Room (ER)

4. OP (Operating Theatre)

5. Intensive care ward (ICU)

6. Surgical Ward

7. Rehabilitation

8. Back into life

In the operating theatre, the injuries are treated with the most modern techniques and surgery, using biocompatible materials. Ulm has one of the most modern operating theatres for this purpose. Clinicians and research workers in Ulm are always trying to improve the operative techniques and materials.

In order to avoid or alleviate the long-term physical and mental consequences of a trauma, the patient is given scientifically based rehabilitation treatment. In cooperation with the surrounding rehabilitation clinics, Ulm scientists are studying individual rehabilitation needs and how to optimise the sustainability of rehabilitation measures.

The Ulm doctors and scientists accompany the traumatised patients in all phases of treatment. The objective is to achieve sustained results, which pass from the laboratory to the hospital bed and then work their way all through society.

On the intensive care ward, the patient is cared for 24 h a day by the team of doctors and nurses. The aim is to stabilise and improve organ function, as well as to provide a high level of psychological support. Ulm scientists are concentrating on the early detection and avoidance of severe complications.

Once the patient is out of acute danger, the focus is on the physical and mental regeneration in the hospital ward. Cure and regeneration are strongly influenced by the patient's state of health and his age. These are aspects that have hardly been considered in previous research. Ulm scientists are tackling these issues with an innovative research concept.

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