

# **The life-saving effect of hyperbaric oxygenation during early-phase severe blunt chest injuries.**

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The effect of hyperbaric oxygenation (HBO<sub>2</sub>) on survival during the early phase of severe blunt chest injury (BChI) has not been elucidated. Our aim was to investigate this effect on human victims of BChI. We monitored cardiac index (CI), stroke volume index (SVI), PaO<sub>2</sub> and PaO<sub>2</sub>/FiO<sub>2</sub> in 18 victims treated conventionally, and 8 victims treated under combined conventional and HBO<sub>2</sub> treatment. Out of the 18 victims, 4 survived (Group A) and 14 died (Group B). Another 8 victims, in Group C, received HBO, and all survived. Human victims showed marked reductions in all cardiorespiratory values during the first 24 h. Group B persistently tended towards a decrease in SVI, PaO<sub>2</sub>/FiO<sub>2</sub> and PaO<sub>2</sub>, eventually reaching fatal levels. The survivors developed a cardiorespiratory function characterized by a tendency towards recovery of all monitored parameters, more notable in Group C, which showed an earlier and more significant normalization vs. Group A (P<0.01). Our clinical data suggest that the earliest possible HBO<sub>2</sub> treatment after severe blunt trauma can significantly enhance victims' survival.

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