

response (n=4); improved technology and communication to aid coordination and disaster response implementation (n=7).

### **Conclusion**

Challenges to provision of emergency surgery disaster response are summarised and potential mitigating strategies proposed. Technical advances in mobile imaging, surgery, telemedicine and robotics bring feasibility, standardisation and economic viability to the morally imperative required improvement in surgical disaster-response in developing countries. In conjunction with the WHO Essential Trauma Care Program and Emergency Medical Team Registry these innovations may provide a template for affordable and safe systems of disaster preparedness, and training of medical professionals.

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## **PATHOGENETIC MECHANISMS OF BLEEDING GASTRO-DUODENAL ULCER RELAPSE**

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***Key words:*** bleeding ulcer

The profound special study of the substrate source of bleeding during active ongoing bleeding as well as some intimate mechanisms for the development of bleeding relapse to perform in clinic is simply impossible.

Our aim was to form acute and chronic medication and stressful bleeding ulcers in experimental animals with further investigation of the morphological substrate of the source of bleeding and the state of the functional systems of the rat's organism. The formation of a medicated bleeding ulcer leads to significant pathophysiological changes in the organism of the experimental animal: a significant increase in the mean of ulcerative grade from  $3.0 \pm 0.4$  points to  $3.3 \pm 0.4$  points and the ulcerous index from 2.7% to 2.97%. There is a acute increase in the activity of the i-NOS periulcerous area in the identified cases - and is respectively 50% and 70% of the studied animals with pronounced activity of the enzyme in the mucous membrane around the source of bleeding. In animals with the formation of chronic bleeding ulcers the growth of i-NOS activity was detected not only in the periulcerous region, but also in the smooth muscle of vessels of the submucosal layer, which was not observed in the formation of acute bleeding ulcer. The correlation between the activity of i-NOS periulcerosis and the level of stable NO blood serum from  $11.7 \pm 2.5$  nmol / ml in the formation of acute stressful bleeding ulcers to  $56.8 \pm 5.4$  nmol / ml in the formation of chronic stressful bleeding ulcer.

The results of the study armed us with knowledge about the intimate mechanisms of bleeding depending on the nature and genesis of ulcers, which makes it possible to improve the treatment and prevention of bleeding relapse in patients.

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