DOI:10.16016/j.1000-5404.1991.04.008

A Retrospect of Three Years Research on Blast Injuries

Wang Zhengguo, Zhu Peifang, Yang Zhihuan, et al (Research Institute of Field Surgery, Third Military Medical College, Chongqing, 630042)

Abstract The research on blast injuries was continued in our lab in the last 3 years. Altogether 145 sheep, 54 dogs, 65 rabbits, 560 rats and 105 guineapigs were employed and the methods to inflict injuries consisted of TNT charge explosion, shock tube testing, and gunfiring. The main results obtained in the 3-year-period were follows:

1. A medium-sized and a small shock tubes were designed and manufactured to inflict blast injuries on small animals and reginal blast injuries.

2. A mathematic model was developed to predict the dynamic responses of the chest wall to blast waves in sheep. It was demonstrated that the implosion effect might play an important role to cause lung damages.

3. The immune function of the animals after moderate burn-blast combined injury was even more active than before injury. The infusion of electrolyte solution associated with whole blood was most effective to treat burn-blast combined injury.

4. A reference formula to express the safety limits of muzzle blast waves to nonauditory injuries of human body was put forward, that is, $P = 41 - 3 \ln (TC \cdot N/4)$ (kPa).

5. A model of ocular blast injury was established in rabbits with the small shock tube. It was found that a decrease of the ability of learning and memorizing after blast exposure in rats.

Key worbs blast injury; safety limit of muzzle blast waves; shock tube; implosion effect; burn-blast combined injury; stress-strain effect

---

脑室注入尿激酶治疗脑室出血2例报告

焦 辉* （第三军医大学 90级研究生） 630038

本文报告2例用尿激酶注入脑室治疗高血压性脑出血的病人，获得成功。

病例1 赵××，女性，74岁。因头痛、恶心、伴右肢体力弱2 d住院，既往有高血压病史。病人呈浅昏迷、右侧肢体轻瘫、双下肢腱反射弱、双巴氏征（+）、颈有抵抗、CT扫描发现左侧脑室出血，入院第2天行左侧脑室前角穿刺引流。

病例2 武××，男性，47岁。因头痛、呕吐伴精神异常32h住院。有家族性高血压史。查体：除脑膜刺激征阳性外，无定位体征。发病第6天行脑室引流。

1 操作及用药

按脑室穿刺术常规行侧脑室前角穿刺，成功后固定引流管。尿激酶5000u、生理盐水4 ml～6 ml稀释后注入脑室，首次为半支或1支 2/d、第2、3天2支 2/d，72h拔管。做头颅CT对照。为避免癫痫发作及防止颅内感染，同时用鲁米那及抗生素。

2 讨 论

脑室出血死亡率高，是因为（1）血液滞留于脑室形成血块，阻塞中孔造成脑水肿。(2) 压迫周围脑组织，刺激破坏下丘脑，引起胃出血。(3) 刺激脉络丛分泌增加，加重脑水肿。（4）造成颅内感染及精神异常，加重临床症状及颅内压，最终导致脑疝而死亡。

（下转338页）

?1994-2016 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

参 考 文 献

1. Kawamura B. Limb lengthening. Orthop Clin North Am 1978; 9(1):155
2. Kawamura B, Hosono S, Takahashi T. The principles and technique of limb lengthening. Int Orthop (SICOT) 1981; 5:69
3. 汤雪明 柴本甫。实验性骨折愈合的超微结构研究——成纤维细胞与软骨细胞演变和归宿的电子显微镜观察。中华医学杂志 1980; 60:385
4. 唐国民 徐印坎 张文明，等。胫骨近侧骨骺分离延长和成角实验研究。中华骨科杂志 1988; 8(2):138

(收稿：1991.01.21；修回：1991.03.24)

Histological Study of Tibial Lengthening with Metaphyseal Osteotomy in Goats

Hu Jian, Zeng Xianzheng, Li Qihoug (Department of Orthopaedics, Southwest Hospital, Third Military Medical College, Chongqing, 630038)

Abstract The histological changes in tibial lengthening with metaphyseal osteotomy were observed in 30 goats. It was found that (1) slow lengthening rate of 1 mm/day could enable the tissues to adapt the mechanical traction, and consequently the limitation of elongation could be increased; (2) the new bone formed in the lengthened region might be the result of a combined osteogenesis from endochondral, intramembranous, and fibrous tissue ossification; and (3) the osteogenetic process could be distinguished into 3 stages of hemorrhage and organization of the hematocele, callus formaton, and remodelling of the new bones.

Key words tibia; bone lengthening; metaphyseal; goat

(上接334页)

在脑室出血的急性期，一般尽早做侧脑室引流，也可治愈。但一旦病情拖延，脑室内很快形成血块，则不易引流。

尿激酶是一种纤溶酶激活剂，能直接使纤溶酶元转为纤溶酶，从而水解纤维蛋白，使血块溶解。

我们上述两例病人，除脑室引流外并注入尿激酶的治疗方法，两例病人均存活。治疗前后CT扫描对比，血肿明显减少，症状迅速改善，缩短了病程。并且对于失去手术机会和不易手术者（年龄大，体弱），增加了抢救机会。降低死亡率。

关键词 脑室；出血；尿激酶；治疗

(收稿：1991.02.28；修回：1991.06.05)

* 原北京军区总医院神经内科

?1994-2016 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net