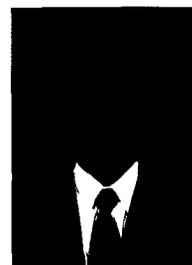


含钙镁生物敷料对氢氟酸烧伤的疗效

王凌峰 胡国林 张志坚 巴特 荣志东 王宏 张军 曹胜军 张国华



【摘要】 目的 观察大鼠及人氢氟酸烧伤后局部应用“含钙镁生物敷料”(吸附钙、镁离子液后与戊二醛交联的绵羊真皮)的疗效,为临床治疗氢氟酸烧伤寻找更好的方法。方法 将 Wistar 大鼠分成对照组(24 只)、不治疗组(32 只)、湿敷 A 组(32 只)、生物敷料 A 组(32 只)。后 3 组大鼠制成 3 cm × 3 cm 的氢氟酸Ⅲ度烧伤模型,设伤后 4、8、24、72 h 为观察时相点(每时相点 8 只)。生物敷料 A 组伤后应用“含钙镁生物敷料”覆盖创面并定期更换,湿敷 A 组、不治疗组、对照组则分别代以“湿敷液”或等渗盐水纱布湿敷。计算各组大鼠死亡率、进行组织病理学观察、测定血钙浓度。将 46 例氢氟酸烧伤患者分为湿敷 B 组与生物敷料 B 组,两组创面参照动物实验进行对比用药并观察疗效。结果 对照组、不治疗组、湿敷 A 组、生物敷料 A 组大鼠的死亡率分别为 0、31.2%、15.6%、6.2%。不治疗组大鼠伤后创面进行性加深,生物敷料 A 组与湿敷 A 组相对而言局部损伤略轻。对照组大鼠各时相点血钙浓度均高于其余 3 组,生物敷料 A 组各时相点均高于不治疗组与湿敷 A 组。伤后 8、24 h,生物敷料 A 组血钙浓度分别为(2.215 ± 0.008)、(2.216 ± 0.008) mmol/L,不治疗组为(1.813 ± 0.017)、(1.912 ± 0.013) mmol/L,湿敷 A 组为(2.015 ± 0.006)、(2.018 ± 0.010) mmol/L,生物敷料 A 组与后两组比较,差异有统计学意义($P < 0.01$)。生物敷料 B 组患者创面用药的镇痛效果及后期愈合情况明显优于湿敷 B 组。结论 “含钙镁生物敷料”可用于氢氟酸烧伤后的急救和局部创面的后续治疗。

【关键词】 烧伤,化学; 氢氟酸; 钙; 镁; 生物敷料

The efficacy of biological dressing containing calcium and magnesium on the management of hydrofluoric acid burns WANG Ling-feng, HU Guo-lin, ZHANG Zhi-jian, BA Te, RONG Zhi-dong, WANG Hong, ZHANG Jun, CAO Sheng-jun, ZHANG Guo-hua. Department of Burns, the Third Affiliated Hospital of Inner Mongolia Medical College, Baotou 014010, P. R. China

【Abstract】 Objective To observe the efficacy of biological dressing containing calcium and magnesium (sheep dermis absorbing calcium and magnesium and cross-link with glutaraldehyde) on the management of hydrofluoric acid burns in rats and patients. Methods Wistar rats were randomly divided into A ($n = 24$, normal control, with isotonic saline dressing after burns), B ($n = 32$, with isotonic saline dressing treatment after hydrofluoric acid burns), C ($n = 32$, with wet-dressing treatment after hydrofluoric acid burns) and D ($n = 32$, with biological dressing treatment after hydrofluoric acid burns) groups. The rats in the latter 3 groups were inflicted with 3 cm × 3 cm TBSA full-thickness burns, and Mortality, concentration of blood calcium, histopathological observation were carried out at 4, 8, 24 and 72 postburn hours (PBH), with 8 rats at each time-points. In addition, 46 patients with hydrofluoric acid burns were divided into E (with wet-dressing treatment) and F (with biological dressing treatment) groups to compare the curative effect. Results The mortality in A, B, C, D groups were 0, 31.2%, 15.6%, 6.2%, respectively. The wound in B group was deepened gradually after burns, but that in D group was slighter when compared with that in C group. The concentration of blood calcium in A group was higher than that in B, C and D groups at each time-points, and that in D groups was higher than that in B and C groups. The concentration of blood calcium in D group at 8 and 24 PBH were [(2.215 ± 0.008), (2.216 ± 0.008) mmol/L], which were obviously higher than those in B [(1.813 ± 0.017), (1.912 ± 0.013) mmol/L] and C [(2.015 ± 0.006), (2.018 ± 0.010) mmol/L] groups, ($P < 0.01$). The clinical outcome in E group was much better than that in F group. Conclusion Biological dressing containing calcium and magnesium can be applied in the emergency management and following treatment after hydrofluoric acid burns.

【Key words】 Burns chemical; Hydrofluoric acid; Calcium; Magnesium; Biological dressing

氢氟酸烧伤是临床遇到的较严重的烧伤,具有其特殊性和潜在危险性。低浓度氢氟酸烧伤就可引

起严重的皮肤损害,且进行性加深。如对受伤面积较大的高浓度氢氟酸烧伤患者处理不当,可引发全身中毒症状和致命性的低钙血症。烧伤的局部治疗非常重要,为了提高对氢氟酸烧伤的疗效,笔者应用“含钙镁生物敷料”治疗氢氟酸烧伤局部,并与“湿

基金项目:内蒙古卫生厅基金(2001008)

作者单位:014010 包头,内蒙古医学院第三附属医院烧伤科

