tion following intracerebral hemorrhage in rats [Neurosurg 1998 89] Goldstein I. Teng ZP Zeserson F. et al Hemin induces an iron de.

expression under hypoxia J Biol Chem 2000 275 2281—2287. XiG Keep RF Hoff IT Etythrocytes and delayed brain edema form a

Landau E Tirosh R Pinson A et al Protection of thrombin receptor

-410

pendent oxidative injury to human neuron like cells I Neurosci Res

28 Wang X Mori T Sumii T et al Hemoglob in induced cytotoxicity in rat cerebial cortical neurons caspase activation and oxidative stress Stroke 2002 33 1882-1888

29 Huang F XiG Keep RF et al Brain edema a fier experimental intrac. erebral hemorihage role of hemoglob in degradation products INeuro suig 2002 96 287—293 30 Wu J Hua Y Keep RF et al Oxidative brain in jury from extravasated

erythrocytes after intracerebral hemorrhage Brain Res 2002 953 45 31 Connor R Menzies S, Burdo R et al Iron and iron management proteins in neurobiology Pediatr Neurol 2001 25 118-129 32 Wagner KR Sharp FR Ardizzone TD et al Heme and iron metabo. lism note in cerebral hemonrhage I Ceneb B lood Flow Metab 2003 23 629-652

33 Wu J Hua Y Keep RF et al Iron and iron handling proteins in the

37 Wang X Asahi M Lo EH Tissue type plasm in ogen activator amplifies

Lett 1999 274 79-82 38 Wang YC Lin CW Shen CC et al Tissue plasminogen activator for the treatment of intraventricular hematoma the dose effect relationship

JNeurolSci 2002 202 35-41 39 Sum iiT LoEH Involvement of matrix metallo proteinase in thrombolys. is associated hemorrhagic transformation after embolic focal ischemia in rats Stroke 2002 33 831-836 40 AsahiM AsahiK Wang X et al Reduction of tissue plasminogen ac tivator induced hemorrhage and hrain injury by free radical spin trapping after embolic focal cerebral ischem ia in rats I Cereb B lood Flow Me tab 2000 20 452-457

(收稿日期: 2004-09-29修回日期: 2004-11-15)

。医学简讯。

brain a fter in tra cere bral hemorthage Stroke 2003 34 2964296-9

34 XiG Keep RF HuaY et al Attenuation of thrombin induced brain edema by cerebral thromb in Preconditioning Stroke 1999 30 1247—

35 XueM DelBigioMR Acute tissue damage after injections of thrombin and plasm in into rat striatum Stroke 2001 32 2164—2169
36 Kushimo to S Yamamoto Y Shibata Y et al Implications of excessive

head in jury Neurosurgery 2001 49 1084-1089

fibrinolysis and a -plasmin inhibitor deficiency in patients with severe

hemoglob in induced neurotoxicity in rat neuronal cultures Neurosci

波浪式脚趾屈曲(undulating toe flexion UTF)运动是 1992年发现的一种体征, 表现为拇趾首先跖屈, 然

波浪式脚趾运动不能排除脑死亡的诊断

后紧跟着是第 2.3.4.5脚趾的快速依次跖屈。据最近的 Eur J Neuro报道, 在确诊的脑死亡者中约 25%存

在 UTF 但临床医生不能认为这是残存脑活动的征象。尽管患者还存在运动,但已经死亡——因为一旦脑死

亡确诊,就不会再有恢复的可能。

阿根廷布官诺斯艾利斯 RamosMejia医院的 Saposnk等对 107例患者的异常运动进行了前瞻性研究,平 均年龄为 42岁,均符合美国神经病学会执业标准(American A cademy of Neurology Practice Parameters)制定

的脑死亡标准,包括无反应或昏迷、无脑干反射和呼吸停止。结果发现,47例患者(44%)在脑死亡后存在自 发性或反射性运动, 然而却未检测到皮质或脑干反应。 UTF是最常见的意识丧失体征, 见于 25 例患者 (23%) 。它可由脚底的触觉刺激所触发,在反复刺激 $6 \sim 8$ 次后趋于消失。在作出脑死亡诊断后最初 12 h

内进行评估的患者其存在 UTP征的可能性增高 4.3倍,在校正年龄、性别或脑死亡的病因后,这种运动的发

生频率或幅度无明显变化。 Saposnik指出, UIF征是一种脊髓反射,这已经由脑电图、体感诱发电位和脑干听觉诱发电位阴性所证 实。从事获取移植器官的医务人员以及患者家属应该了解这种运动形式,UTT和其他的脊髓反射运动不应 排除脑死亡的诊断, 也不应该将其作为放弃移植供体的一个原因。

(曲东锋)