Study of cellular and subcellular damages and their pathogenesis in septic shock in rats

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Abstract The changes of hepatocyte and skeletal muscle membrane potential, the membrane fluidity of microsomes, microviscosity, and the order coefficient of the arrangement of membrane lipid molecules were determined in rats after their cecum was ligated and punctured to induce septic shock. Lipid peroxides of plasma and the liver, phospholipase A_2 and salivary acid were determined as well. It was found that both in the first 10 hours and the next 20 hours of septic shock, the resting membrane potential of hepatocytes and skeletal muscles was significantly suppressed as compared with that of the sham-operated rats. The membrane potential of hepatocytes was suppressed prior to the decrease of blood pressure and much earlier and much more severe than that of skelatal muscles. Lipid peroxides of the liver were increased by 1.6 fold ($P<0.01$) and salivary acid was decreased significantly ($P<0.01$). The membrane fluidity of microsomes was reduced ($P<0.01$) and microviscosity and the order coefficient of membrane lipid molecules were increased ($P<0.01$). Plasma phospholipase A_2 was elevated to 2074.2±6950u/ml ($P<0.01$) and hepatic phospholipase A_2 to 2943.3±471.8u/ml tissue. These findings suggest that septic shock modifies the molecular structure of the membrane, activates phospholipase A_2, and decreases the content of salivary acid.

Key words shock, septic; membrane potentials; microsomes; phospholipases A

原发性肾上腺恶性淋巴瘤一例

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彭××，男，48 岁，电工。住院号 171683。因反复寒战、高热 39 d，于 1990 年 12 月 6 日入院。查体：T 36.8℃，BP 14/10kPa。浅表淋巴细胞不肿大。胸骨无压痛。心肺（－）。肝肋下 1cm，脾侧位 1.5cm，均质中无压痛。Hb129g/L，WBC5.3×10⁹/L，N0.77，L 0.23，PLT 154×10⁹/L。血沉 24mm/1h。肝肾功能正常。B 超示“右肝后叶占位病变：肝脓肿？肝癌？”CT 示“右肝后方之肿块很可能来自肾上腺”。第 2 次 B 超示“右肾上腺 6.1cm×6.5cm 不均质肿块”。ivp 示“右肾上盏基底部上方向下受压，结合 CT 考虑肾上腺占位”。γ-扫描示“右肝前上、前下段稀疏区，考虑占位不能除外”。1991 年 1 月 17 日部腹探查，见右肾上腺内侧一约 12cm×8cm×2cm 包块，切除包块及右上肾送病理检查：肿块切面呈灰白色，部分区域有坏死。镜检：大量瘤细胞呈片团状或弥漫分布，细胞呈圆形、椭圆形，较小。胞浆少。核圆形、卵圆形、深染，见核裂像。诊断为“右肾上腺非何杰金淋巴瘤（NHL）（小淋巴细胞型）。术后查骨髓象大致正常。1 月 28 日予以“COP”方案化疗，患者迅速衰竭，2 月 10 日死亡。

本病例特点：(1)中年男性；(2)起病急、病程短；(3)以寒战、高热为突出表现；(4)浅表淋巴结不大，但肝脾大；(5)血象、骨髓象正常或基本正常；(6)有消瘦、乏力、纳差，病程中有低血压，24 h 尿 17-OH

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amylose succinate absorbale hemostat in a canine model. J Biomed Mater Res: Applied Biomaterials, 1987; 21: 299

6. 孙瑞元。半数致死量。见：徐叔云 卞如濂 陈修主编。药理实验方法学。北京：人民卫生出版社，1982：400～406

7. Millet CH. Properties of cyanoacrylates-An overview. Adhesives Age, 1981; (10): 27

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Adhesive-hemostatic effect and toxicity of 3α-cyanoacrylic esters

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Abstract It was found that citrated rabbit blood in a test tube could be coagulated within 5 seconds after the addition of isobutyl α-cyanoacrylate, isoamyl α-cyanoacrylate and isobutyl α-cyanoacrylate glycolate in different concentrations respectively. All these monomers exhibited quick and reliable styptic effect on the hemorrhage of the liver, the spleen and the kidneys of rabbits and rats respectively, and their styptic effect was superior to that of most conventional hemostatics. The test for their acute toxicity revealed that they were of quite low toxicity and their dosage for adhesive-hemostatic purpose was about one gram. There was no evident injurious effect on the functions of the kidneys and the liver and the peripheral hemogram in rabbits. The test for subacute toxicity revealed no obvious pathological changes but some imflammatory responses over the site of drug application.

Key words tissue adhesives; hemostatics; cyanoacrylates; α-cyanoacrylatic ester

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为 1.0mg(参考值 5.5mg～12.0mg)，但 17-KS 及血皮质醇正常，故诊断肾上腺皮质功能减退的依据不足；(7)因为此瘤最先发现于右肾上腺，浅表淋巴结不大；胸部 X 线及 CT 检查未见纵隔淋巴结肿大，头颅 CT 检查均未见转移灶；而且剖腹探查时见肝、胆、胃、十二指肠、脾、大网膜、腹主动脉及髂内血管上部均未见明确包块或转移灶，故笔者认为此瘤属于原发；(8)化疗效差。

肾上腺淋巴瘤少见，国外有人对 173 例 NHL 病人行 CT 检查，发现肾上腺淋巴瘤仅 7 例[1]。迄今 40 年文献报道的原发性肾上腺淋巴瘤不过 7 例[2]。国外报道的首例肾上腺淋巴瘤，大量证据支持合并阿狄森氏病[3]。在 7 例原发性肾上腺淋巴瘤中，有 1 例合并肾上腺皮质功能不全且有临床表现[2]。还有继发性肾上腺淋巴瘤浸润的阿狄森氏病，化疗后肾上腺皮质功能恢复的报道。

一般认为临床上对此瘤的诊断以 CT 检查的意义较大[1]。原发性者确诊后应尽早手术切除，如已播散可作姑息性化疗。国外内尚未对此瘤放疗的报道。

关键词 肾上腺；淋巴瘤

参考文献

1. Paling MR, Williamson BRJ. Adrenal involvement in non-Hodgkin lymphoma. American Journal of Roentgenology, 1983; 141: 303～305

2. Harris GJ, Tio FO, Hoff DDV. Primary adrenal lymphoma. Cancer, 1989; 63(4): 799～803

3. Lee Yeu-Tsu N. Malignant lymphoma: Nodal and extranodal disease. New York: Grune and Stratton, 1974: 268

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