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小儿烧伤1255例分析——关于“小儿烧伤严重程度分类”的建议

艾深海 （第一附属医院 烧伤中心）

提 要 1. 本文报道我院25年来收治小儿烧伤1255例的治疗结果。重点讨论了小儿烧伤的预防措施，主要是加强热液、火炉及煤汽油的管理和周到地照顾小儿。

2. 根据小儿不同烧伤面积的休克发生率、败血症发生率及死亡率的阶段性变化而提出小儿烧伤严重程度的分类方法是“1—3—5”。

关键词 小儿；烧伤；严重程度分类

我院25年来（58.9～83.12）共收治烧伤病人4651例，其中12周岁以下者1255例（占26.95%）。本文试图通过1255例的分析来探讨小儿烧伤的一些特点，并提出严重程度分类的建议。

临 床 资 料

①均为住院病人，年龄在12周岁（含12周岁）以下，均有完整记录；②其中男740，女515，男女之比约1.5:1；③年龄最小者10天，不满5岁者804（占总数的64.06%），2岁组最多，252人，以后随年龄的增长递减；④一年中收容最多的是炎热的5～9月，共809例（占全年的64.46%）；⑤治愈1196例（95.03%）；⑥死亡59例（4.7%）、半致死烧伤面积70.03%；⑦受伤原因（见表1）；⑧烫伤及火焰烧伤的年龄分布（见表2）；⑨受伤地点：1207例是家庭中的生活烧伤（96.18%），其余48例是在户外；⑩小儿不同烧伤面积的休克、败血症发生率、死亡率的关系（见表3）；⑪确诊为败血症者56例，死亡30例，败血症死亡率53.57%；

表1 烧 伤 原 因

	热液烫伤	火焰烧伤	电（击）烧伤	化学烧伤	其它	总计
例数（人）	905	308	31	10	1	1255
%	72.11	24.54	2.47	0.8	0.08	100.00

表2 烫伤、火焰烧伤的年龄分布

年龄分组（岁）	0～	5～	9～12	总 计
烫伤数（%）	657（81.76）	173（60.48）	75（60.40）	905（72.11）
火焰烧伤数（%）	141（17.52）	99（34.61）	68（41.21）	308（24.54）

表3 不同烧伤面积的休克、败血症发生率及死亡率的关系

烧伤面积%		0～	10～	20～	30～	40～	50～	60～	70～	80～	90～
烧伤例人数		435	388	223	100	53	23	17	9	5	2
休克	发生人数	4	37	75	47	31	21	15	9	5	2
	发生率%	0.92	9.54	33.63	47.00	58.49	91.30	88.23	100.00	100	100
败血症	发生人数	1	7	8	12	6	10	4	5	1	1
	发生率%	0.22	1.80	0.34	12.00	11.32	43.47	23.52	55.56	20.00	20.00
死亡人数		0	4	6	13	8	9	7	6	4	2
死亡率%		0	1.03	2.69	13.00	15.09	39.13	41.17	66.67	80.00	100.00

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表4 不同严重程度烧伤休克、败血症发生率及死亡率的关系

严重程度分类	轻度	中度	重度	特重
烧伤面积%	0～	10～	30～	50～
休克发生率%	0.92	18.33	50.96	94.64
败血症发生率%	0.23	2.45	11.76	39.30
死亡率%	0	1.64	13.73	50.00

血培养阳性细菌以金黄色葡萄球菌和绿脓杆菌居多；⑫死亡59例，主要死亡原因依次为败血症30，休克17，脑水肿脑疝4，急性肾衰4，严重呼吸道烧伤2，脓毒症2，败血症居死亡原因之首（50.82%），休克期死亡者仍多，脑疝较成人多。

讨 论

一、本组家庭生活烧伤1207例96.18%，高于文献报道[1]。由于小儿烧伤多是大人照顾不周引起，而致伤的主要方式又是家中的热液放置不当或者火炉未加防护造成的。因此小儿烧伤是可以防止的。防止小儿烧伤应当抓住以下几点：①热液容器不要放在地板上；②给小儿洗澡时应先倒冷水，以防因取冷水时小儿误入盆中而烫伤；③不要把小儿单独留在厨房中或火炉旁；④火炉应加防护；⑤不要用汽油代替煤油点灯或烧饭；⑥加强用电安全教育，正确安装电路电器设备等。

表5 烧伤严重程度的分类

	轻度	中度	重度	特重	可记忆为
小儿	<10%	10～30%	30～50%	>50%	“1－3－5”
成人	<30%	30～50%	50～70%	>70%	“3－5－7”

二、由表3看出，小儿不同烧伤面积的休克发生率、败血症发生率以及死亡率均与面积大小成正变关系。休克发生率在烧伤面积10%、20%、30%、50%时呈明显的阶段性变化，烧伤面积在10%以下者435例中只有4例发生休克，而且此4例均有头面部烧伤，因此可以说除个别头面部烧伤者，10%以下的小儿烧伤一般不会发生休克，同时败血症发生也极少，且无1例死亡，对这一部分病例划为轻度烧伤是合适的，一般也可以在门诊治疗（指无深度烧伤和头面部会阴烧伤者）。烧伤面积在10%和20%组其休克的发生率由9.54%上升到33.63%，两组有显著差别，本应分属两个类别，但这种面积的烧伤小儿休克的治愈率较高，结合败血症发生率（分别是1.80%，0.34%）及死亡率（1.03%，2.69%），两组的差别不明显，因此从预后角度来讲，将此两组划为中度烧伤是合适的，而烧伤面积在30～50%者，无论休克发生率、败血症发生率以及死亡率均显著增加，故划分为重度烧伤组。烧伤面积在50%以上者休克发生率高达90%以上，死亡率亦在50%以上，当属特重烧伤组（见表4）。

鉴于以上分析，我们建议将小儿烧伤严重程度作如下划分（见表5）。

根据这个分类能对小儿烧伤的治疗和预后起一定的指导作用，而且此分类易于记忆为：“1－3－5”，与成人的“3－5－7”互相对应。（我科曾把成人烧伤分为轻度烧伤<30%，中度为30～50%，重度烧伤50～70%，70%以上为特重烧伤）[2]。小儿烧伤较成人治疗困难，无论休克发生率、败血症发生率及死亡率都显著高于成人，故各类严重程度的相应面积应低于成人。

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terosseus artery, and the ascending branch of the superior perforating artery, while the palmar division by the palmar carpal branch of the radial artery, the palmar branch of the anterior interosseus artery, and the dorsal carpal branch of the ulnar artery. There are extensive and multiple anastomoses between the anterior interosseus artery and the radial and ulnar arteries with a preponderance of the anastomoses over the radial side of the extremity in regard to the size and number of the participating vessels. The collateral circulation established by the anastomoses between the dorsal and palmar divisions in preponderant over the dorsal side of the extremity. The carpal arterial network is characterized by its multiple arterial origins, multiple anastomoses and multiple divisions to conform to the poly-articular construction and multi-directional movement of the wrist joint.

In addition, the compensation of the blood circulation of the hand through the carpal arterial network in case the radial artery and/or the ulnar artery are severed or gradually obliterated was discussed morphologically.

key word: Arteries around the wrist joint; Anastomoses; Macro-micro-anatomy (p.26)

A Clinical Analysis of 1255 Children with Burn Injuries

Ai Shenhai (Burn Center, First Teaching Hospital Third Military Medical College)

In a twenty-five year period (1958—1983), there were 1255 children admitted to this institute because of various kinds of burn injuries. The overall death rate was 4.7% (59 cases). The causes of death were septicemia (30 cases), shock (17), cerebral edema and hernia(4), acute renal failure(4), severe burn wound scepsis(2), and complications resulting ftom severe inhalation injuries(2).

The burned children were characterized by the following:

1. Children made up 26.9% of all the burn patients admitted during the above-mentioned period.
2. 64.06% of the children were younger than 5 years of age.
3. Most injuries (64.46%) occurred in the hot season (foom May to September).
4. 96% of the children were injured indoorly.
5. The male to female ratio was 1.5:1.
6. Scalding was the main cause of the burn injuries in those younger than 5 years of age, and it accounted for 81.76% of all the injuries.

Since the death rate of burn patients is closely related to the extent of the

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burned area, a"1-3-5" category method for children burn cases is suggested as follows:

1. Mild burns: The affected area is less than 10% TBSA.
2. Moderate burns: The affected area is between 11～30% TBSA.
3. Severe burns: The affected area is between 31～50% TBSA.
4. Extreme severe burns: The affected area is more than 50% TBSA.

(p.33)

The Measurement of Right Ventricle on Left Lateral Chest-films and Its Clinical Application

Dai Shuhua, et al (Department of Diagnostic Radiology, Second Teaching Hospital, Third Military Medical College)

On a left lateral chest radiogram, 3 points are determined: A is the apex of the sternal angle formed by the manubrium and the body of the sternum, B is the highest point of the contact surface between the anterio-superior heart border and the anterior chest wall, and C is the apex of the anterior costophrenic angle. The distances of AC and BC are measured. The ratio of BC:AC is considered as an index of the size of the right ventricle. On the basis of measuring 120 normal subjects, 0.54(0.46±0.04) is employed as the upper limit of normal values.

Left lateral chest radiogram is easy to take. The measuring procedure is simple. The results of this measurement proves to be valuable after the method has been applied clinically. In the evaluation of the size of the right ventricle, this new digital index is helpful in the analysis of serial radiograms. This measurement makes left lateral chest radiogram more useful in detecting cardiac abnormalities.

Key words: Left lateral chset radiogram; Sternal angle (p.35)

Platelet Aggregation in Patients with Severe Viral Hepatitis

Wang Yuming, et al (Department of Infectious Diseases, First Teaching Hospital, Third Military Medical College)

Platelet aggregation ratio (PAR) was assessed in 35 patients with severe viral hepatitis (SVH) with Born's method. The PAR of normal individuals, patients with acute icteric hepatitis, and those with chronic active hepatitis were

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