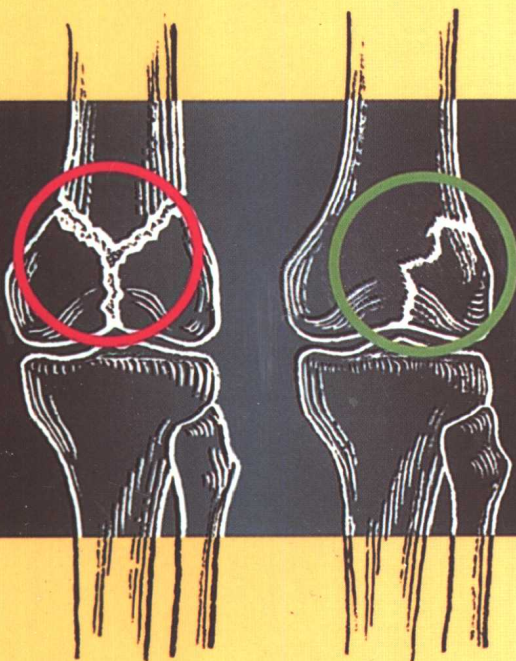


创伤骨科急诊手册

Handbook of Orthopaedic Emergencies

主编 Raymond G. Hart
Timothy James Rittenberry
Dennis T. Uehara

主译 姜保国 傅中国 张殿英



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前 言

本书应用于创伤骨科急诊医学。作为创伤医学教育以及急诊外科实践的参考，本书以一种简明可信的形式整理和发展了创伤骨科医学。内容涵盖了创伤骨科急诊的各个领域，分别由来自不同地区的骨科及急诊室的专家编写，他们具有丰富的临床工作经验。我们希望本书能够为从事急诊创伤医学临床及护理工作的医务人员提供有益的帮助。

R. G. H.

T. J. R.

D. T. U.

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第 1 篇

创 伤 骨 科

1

创伤骨科的基本原则

Raymond G. Hart Brian A. Macauley

I 骨折的定义和一般分类原则

骨折是指骨的连续性中断。这个概念包括各种骨的分裂类型，从微小的骨折到严重的粉碎性骨折。骨折概念的描绘应该简明而准确。除此以外，医生要了解与骨折有关外伤的机制及软组织损伤情况。下面是使用创伤骨科术语来系统描述骨折损伤情况。

A 明确的解剖学部位

外伤骨折的骨在骨骼中的解剖学部位应当首先被描绘。长骨骨折一般被描绘为近、中、远三个部位的骨折。如果一种骨折是通过特殊的解剖学位置，那么正确的解剖学部位应当被说明（如通过股骨颈部位的骨折）。

B 骨折线及骨折类型

骨折线是骨折方向与骨的长轴的相应关系。

1 横断形骨折 骨折线垂直于骨的长轴方向的骨折（图 1）。这种损伤通常是直接暴力引起，属稳定性骨折。

2 斜形骨折 骨折线与骨的长轴形成倾斜角度

(图 2)。这类骨折通常是由间接暴力引起，软组织损伤较轻，骨折愈合较横断骨折要快。

3 螺旋形骨折 骨折线围绕骨的长轴旋转（图 3）。它是由旋转暴力引起。

4 粉碎性骨折 有两个以上碎片的骨折称粉碎性骨折（图 4）。骨折经常伴随严重的软组织损伤并且是不稳定的。

(1) **蝶形骨折** 这种类型的骨折伴有蝶形骨折碎裂块。

(2) **多段骨折** 骨折发生在同一长骨的两个以上节段。此类骨折复位较困难，通常不易愈合。

5 青枝骨折 此类骨折因骨的两端互相作用，通常发生松质骨的骨折，骨折愈合较快。这类骨折通常发生在儿童，发生骨折时骨皮质的连续性仍旧存在。

6 压缩性骨折 这类骨折通常发生在松质骨。当轴向压力超过骨的负担时即发生骨折。常常发生在椎体（图 5）。

7 凹陷性骨折 这类骨折是由局部外力造成骨的一个片断下陷而低于周围骨的水平位置的皮质性骨折。

C 移位

骨折两端的位置发生变化。在描绘移位时，一般以远端相对于近端来说。移位的程度应该根据骨折面接触的百分比来决定。骨折完全移位通常是不稳定的，可能导致进一步的短缩而影响骨折的愈合。

1 重叠移位 骨折端 100% 移位，短缩，重叠移位。

2 分离移位 骨折两端沿着骨的长轴移位。如

果分离的间隙大于 0.5cm，那么骨折的愈合时间将会明显延长。

D 成角

骨折成角以主要的骨折段为基准进行角度的测量。明显的骨折成角畸形必须被矫正。在骨折负重区，成角畸形造成的异常压力将会使关节形成骨性关节炎。

成角可以描述成以几种方式：

1 骨折远端相对于近侧形成的成角关系（例如，Colles 骨折时桡骨远端相对于近端形成的背侧成角畸形，如图 6）。

2 另一种描述方式以骨折段形成角度的顶点的直接位置来决定（例如，Colles 骨折是桡骨远端骨折形成向掌侧的角度）。如果骨折是在前臂和手部，那么术语尺、桡、掌、背通常被使用。在足部，足底及背侧经常被使用。

3 外翻及内翻术语的应用是指受累肢体的远端部分相对于近端部分的长轴位置而言。外翻是指远侧肢体相对于近侧肢体长轴向外侧成角。内翻是指远侧肢体相对于近侧肢体长轴向内侧成角。

E 轴向旋转

骨折段的相互轴向旋转一定要被认识。要避免过度的旋转。放射线检查要包括骨折的上下两端的关节。骨折两断端直径的测量也有助于骨折旋转的诊断。

F 其它分类方法

1 不完全与完全性骨折 如果骨的两侧皮质完全断裂称为完全性骨折，如果骨的皮质仅一侧断裂则

称为不完全性骨折。青枝骨折是一类不完全性骨折，多发生于儿童，仅发生一侧骨皮质和骨膜的断裂。在青少年，骨质韧性大，不易碎裂，不易发生完全性骨折（图7）。

2 稳定与不稳定性骨折 不稳定性骨折是指骨折复位后容易发生移位，而稳定性骨折是指骨折复位后骨折位置容易保持。

3 复杂与不复杂骨折 复杂骨折是指骨折合并严重的附近软组织（神经、血管、肌腱和肌肉）损伤。不复杂骨折是指伴有轻度的软组织损伤。

4 关节内和关节外骨折 关节内骨折是骨折线延伸到关节区域。关节外骨折是指骨折线没有延伸到关节区域。

5 开往性骨折与闭合性骨折 闭合性骨折是指骨折区域的皮肤是完整的。开放性骨折是指骨折区域的皮肤破裂。当骨折断端刺破皮肤或外界力量刺穿皮肤达到骨，都可以发生开放性骨折。后者情况较难诊断，因为这种情况多发生较严重的软组织损伤并且有更大污染的可能。开放性骨折属外科急诊，需急诊手术治疗。初期处理包括浸透碘仿消毒纱布的应用，广谱抗生素的应用。并且准备手术清创。神经血管的状态一定仔细评估。开放性骨折一定要严格按照骨折的损伤程度、伤口的性质和大小、潜在感染的可能以及受伤的机制加以区分。

(1) I类损伤是较轻微的。伤口的长度一般小于1cm，骨和软组织损伤较轻，污染也较轻。

(2) II类损伤包括较大的伤口，但没有软组织的广泛损伤或失活，没有血管损伤和中等程度的污染。

(3) III类损伤包括较大的伤口、软组织的损伤、血管的损伤以及严重的污染。

G 特殊骨折

1 疲劳骨折 疲劳骨折是由反复常期作用于骨的外力引起的骨折。每次疲劳引起轻度微小的骨折，长此下去发生完全性骨折。病人有疼痛但没有明确外伤史。典型病例见于新兵疲劳性的第二跖骨的骨折（行军骨折）。

2 病理性骨折 这类骨折发生在骨质以往存在的疾病。骨在中度或轻度外力或创伤下即发生突然骨折。骨质疏松、感染、肿瘤是引起病理性骨折的常见原因。

3 撕脱性骨折 附着在骨上韧带的牵拉或强有力的收缩引起的骨折（图 8）。

4 人名定义的骨折 表 1 列出了以人名命名的骨折类型。

表 1 人名类骨折

Aviator 骨折	是距骨的骨折，在第一次世界大战期间被描述，是一种水平压力造成的骨折。
Barton 骨折	累及桡骨远端关节面移位骨折，可能发生腕关节半脱位，骨折线可以发生在背侧或掌侧。
Bennett 骨折	第 1 掌骨基底的斜形骨折，掌骨近端形成轴向移位，掌侧边缘形成三角形的骨碎片。
Bosworth 骨折	腓骨远端骨折伴有胫骨脊近端后外的骨碎片。
Boxer 骨折	第 5 掌骨颈骨折伴有掌骨头向掌侧的移位。
Burst 骨折	椎体轴向压力造成的骨折，通常发生骨折碎片向外侧的移位。可以发生在颈椎、胸椎或腰椎。
Chance 骨折	胸腰段椎体的分离性骨折，伴随脊髓、神经根、椎体的水平方向的崩裂骨折。
Chauffeur 骨折	桡骨干的斜形骨折，早期有机械性弯曲，进而通过逆性外力造成的斜形骨折。
Chopart 骨折	骨折或移位累及足的 Chopart 关节。
