

# 中国骨伤<sup>®</sup>

ZHONGGUO GUSHANG

月刊 1987 年创刊 第 33 卷 第 7 期 2020 年 7 月 25 日出版

主 管

国家中医药管理局

主 办

中国中西医结合学会  
中国中医科学院

编 辑

中国骨伤杂志编辑委员会  
100700,北京市东直门内南小街甲 16 号  
电话:(010)64089487  
传真:(010)64089792  
<http://www.zggszz.com>  
E-mail:zggszz@sina.com

主 编 朱立国

执行主编 李为农

编辑部副主任 连智华

出 版

《中国骨伤》杂志社  
100700,北京市东直门内南小街甲 16 号  
电话:(010)64089489  
传真:(010)64089792  
E-mail:zggszz@sina.com

广告经营许可证

京东工商广登字 20180004 号

印 刷

北京汇林印务有限公司

发 行

国内:中国邮政集团公司  
北京市报刊发行局  
海外:中国国际图书贸易集团  
有限公司  
(北京 399 信箱,100044)  
代号 M587

订 购

全国各地邮局  
邮发代号 82-393

邮 购

《中国骨伤》杂志社  
100700,北京市东直门内南小街甲 16 号

国 内 定 价

每期 40.00 元,全年 480.00 元

中国标准连续出版物号

ISSN 1003-0034  
CN 11-2483/R

版权归《中国骨伤》杂志社所有

本刊刊出的所有文章不代表本刊编委会  
的观点,除非特别声明

## 目 次

述评

- 容易忽视的踝关节骨折 ..... 593  
李振东,施忠民

踝关节骨折

- 内外联合固定结合Ⅱ期穿支血管蒂皮瓣治疗 Gustilo-Anderson  
ⅢB 及ⅢC 型踝关节骨折脱位 ..... 596  
侍朋举,孙柏山,张瑞杰,王建生,齐巍,左金增,赵刚  
踝关节骨折合并三角韧带完全断裂 21 例的手术疗效分析  
..... 655  
常小波,王勤业,习洪波,陈圣  
Maisonneuve 骨折的临床诊治特点及 15 例手术疗效分析  
..... 667  
马岗,姜宏,张志刚,刘锦涛,马智佳

临床研究

- 尺骨鹰嘴骨折的内固定选择及临床疗效对比 ..... 602  
张骏,陈定爽,刘东旭,李峰  
斜外侧腰椎椎间融合术后脊柱-骨盆矢状位参数变化与临床疗效的  
相关性研究 ..... 609  
孙秀民,徐宏光,肖良,刘晨,杨晓明,赵泉来,聂文磊  
探讨 3D 影像下顺行髓内钉理想置入点与正常成年人股骨大转子  
最高点的联系 ..... 615  
陈科,宣俊,倪东亮,陈毅,汤旭日,李兴中,成浩,吴恙  
两种不同入路经皮椎间孔镜技术治疗高位腰椎间盘突出症  
..... 621  
杨书情,张世民,吴冠男,靳蛟,林海  
动态锁定螺钉在肱骨干骨折中的临床应用 ..... 631  
苏正兵,李杰,代宇驰,罗刚,郝勇,张峡,周跃  
皮质骨轨迹螺钉与椎弓根螺钉内固定治疗老年腰椎结核的病例  
对照研究 ..... 636  
赖震,石仕元,费骏,韩贵和,胡胜平  
强直性脊柱炎一家系全外显子组测序分析 ..... 672  
任伟凡,胡劲涛,高炀,杜伟斌,章何陋,吴奕江,吴风晴,柴乐,  
全仁夫

## 基础研究

- 通络止痛凝胶制剂对 KOA 滑膜组织中 p53/miR-502-5p/NF-κBp65 的影响 ..... 643  
张晓哲, 张栋, 阮安民, 李惠娟, 陈谱, 周俊, 马玉峰, 祁印泽, 王庆甫  
个体化 3D 打印导向模板辅助胸腰椎椎弓根螺钉置入在强直性脊柱炎中的应用研究 ..... 649  
李超, 牛国旗, 蒋维利, 陈辉, 刘路坦, 周乾坤, 程嘉伟

## 循证医学

- 股四头肌与骨-髌腱-骨自体移植对前交叉韧带重建的 Meta 分析 ..... 677  
李飞, 顾晓东, 卫小春

## 经验交流

- 完全清醒技术在腕管综合征手术中的应用 ..... 659  
秦宏玖, 夏江, 马涛  
背后臂屈伸锻炼配合手法治疗粘连性肩周炎 ..... 662  
张帆, 詹红生, 王庆来, 吴惠明, 周江涛

## 病例报告

- 在张力-应力法则指导下应用 Taylor 空间支架治疗创伤性足下垂 1 例 ..... 627  
马继海, 万春友, 张涛, 王明杰, 葛启航  
钢板螺钉结合锚钉缝合修补三角韧带治疗 Bosworth 骨折 1 例 ..... 665  
洪潮, 胡洪奎, 李超, 李旭, 顾小华

## 综述

- 促进肩袖止点腱骨愈合的研究进展 ..... 684  
刘嘉鑫, 安丽萍, 张广瑞, 周建平, 吴定, 贾耀飞, 韵向东  
间充质干细胞归巢及其在骨科疾病中的研究 ..... 689  
李汪洋, 熊辉

本刊稿约见本卷第 1 期 II

本期责任编辑: 李宜

# CHINA JOURNAL OF ORTHOPAEDICS AND TRAUMATOLOGY

Monthly Established in 1987 Volume 33 , Number 7 July 25 , 2020

## Responsible Institution

State Administration of  
Traditional Chinese Medicine

## Sponsor

Chinese Association of Integrative  
Medicine ;  
China Academy of Chinese Medical  
Sciences  
No.16 Nanxiaojie Dongzhimennei,  
Beijing 100700 , China

## Editing

Editorial Board of China Journal of  
Orthopaedics and Traumatology

## Editor-in-Chief

ZHU Li-guo(朱立国)

## Executive Editor

LI Wei-nong(李为农)

## Assistant Director

LIA N Zhi-hua(连智华)

## Publishing

Publishing House , China Journal of  
Orthopaedics and Traumatology  
No.16A Nanxiaojie Dongzhimennei,  
Beijing 100700 , China  
Tel(Fax) : 0086-10-64089792  
E-mail : zggsszz@sina.com

## Printing

Beijing Huilin Printing Co., Ltd

## Overseas Distributor

China International Book Trading  
Corporation  
P.O.Box 399 , Beijing , China  
Code No.M587

## Mail-order

Publishing House , China Journal of  
Orthopaedics and Traumatology  
No.16A Nanxiaojie Dongzhimennei,  
Beijing 100700 , China  
Tel(Fax) : 0086-10-64089792  
E-mail : zggsszz@sina.com

## CSSN

ISSN 1003-0034  
CN 11-2483/R

## Copyright © 2020 by the China Journal of Orthopaedics and Traumatology Press

All articles published represent the opinions  
of the authors , do not represent official  
policy of the Editorial Board , unless  
this is clearly specified

## CONTENTS IN BRIEF

### Froum of specialist

- An easily neglected ankle joint fractures ..... 593  
LI Zhen-dong, SHI Zhong-min

### Ankle joint fracture

- Internal and external fixation combined with second-stage perforator flap for the treatment of ankle fracture dislocation of Gustilo-Anderson types III B and III C\* ..... 596

SHI Peng-ju, SUN Bai-shan, ZHANG Rui-jie, WANG Jian-sheng, QI Wei, ZUO Jin-zeng, ZHAO Gang

- Operation-effect analysis of 21 patients with ankle fracture and complete rupture of deltoid ligament\* ..... 655

CHANG Xiao-bo, WANG Qin-ye, XI Hong-bo, CHEN Sheng

- Clinical diagnosis and treatment features of Maisonneuve fracture and analysis of clinical outcome of 15 patients\* ..... 667

MA Gang, JIANG Hong, ZHANG Zhi-gang, LIU Jin-tao, MA Zhi-jia

### Clinical study

- Choice of internal fixation selection and clinical effect of olecranon fracture\* ..... 602

ZHANG Jun, CHEN Ding-shuang, LIU Dong-xu, LI Feng

- Relationship between alterations of spine-pelvic sagittal parameters and clinical outcomes after oblique lumbar interbody fusion\* ..... 609

SUN Xiu-min, XU Hong-guang, XIAO Liang, LIU Chen, YANG Xiao-ming, ZHAO Quan-lai, NIE Wen-lei

- Correlation between highest point of greater trochanter and the ideal entry point for antegrade femoral nailing by three-dimensional images\* ..... 615

CHEN Ke, XUAN Jun, NI Dong-liang, CHEN Yi, TANG Xu-ri, LI Xing-zhong, CHENG Hao, WU Yang

- Treatment of upper lumbar disc herniation with percutaneous endoscopic lumbar discectomy through two different approaches\* ..... 621

YANG Shu-qing, ZHANG Shi-min, WU Guan-nan, JIN Jiao, LIN Hai

- Clinical application of dynamic locking screw in treating humeral shaft fracture\* ..... 631

SU Zheng-bing, LI Jie, DAI Yu-chi, LUO Gang, HAO Yong, ZHANG Xia, ZHOU Yue

- Case-control study on cortical bone trajectory screw and pedicle screw internal fixation for the treatment of senile patients with lumbar tuberculosis\*

LAI Zhen, SHI Shi-yuan, FEI Jun, HAN Gui-he, HU Sheng-ping

- Whole-exome sequencing in a pedigree with ankylosing spondylitis\*

REN Wei-san, HU Jing-tao, GAO Yang, DU Wei-bin, ZHANG He-lou, WU Yi-jiang, WU Feng-qing, CHAI Le, QUAN Ren-fu

## **Experimental research**

<b>Effect of Tongluo Zhitong (通络止痛, TLZT) gel preparation on p53/miR-502-5p/ NF-κBp65 in synovial tissue of knee osteoarthritis*</b> .....	643
<i>ZHANG Xiao-zhe, ZHANG Dong, RUAN An-min, LI Hui-juan, CHEN Pu, ZHOU Jun, MA Yu-feng, QI Yin-ze, WANG Qing-fu</i>	
<b>Experimental study of individualized 3D printing-guided template combined with thoracolumbar pedicle screw placement for the treatment of ankylosing spondylitis*</b> .....	649
<i>LI Chao, NIU Guo-qi, JIANG Wei-li, CHEN Hui, LIU Lu-tan, ZHOU Qian-kun, CHENG Jia-wei</i>	

## **Evidence-based medicine**

<b>Outcomes of quadriceps tendon autograft versus bone-patellar tendon-bone autograft for anterior cruciate ligament reconstruction: a Meta-analysis*</b> .....	677
<i>LI Fei, GU Xiao-dong, WEI Xiao-chun</i>	

## **Empirical communication**

<b>Clinical application of wide awake technique in carpal tunnel syndrome*</b> .....	659
<i>QIN Hong-jiu, XIA Jiang, MA Tao</i>	
<b>Back arm flexion and extension combined with manipulation for the treatment of patient with adhesive scapulohumeral periarthritis*</b> .....	662
<i>ZHANG Fan, ZHAN Hong-sheng, WANG Qing-lai, WU Hui-ming, ZHOU Jiang-tao</i>	

## **Case report**

<b>Treatment of a case of traumatic foot drop with Taylor spatial frame under the guidance of tension-stress rule</b> .....	627
<i>MA Ji-hai, WAN Chun-you, ZHANG Tao, WANG Ming-jie, GE Qi-hang</i>	
<b>Plate and screw with suture anchors for repair deltoid ligament in treating Bosworth fracture: a case report</b> .....	665
<i>HONG Chao, HU Hong-kui, LI Chao, LI Xu, GU Xiao-hua</i>	

## **Review**

<b>Progress on improving tendon-to-bone healing for the enthesis of rotator cuff*</b> .....	684
<i>LIU Jia-xin, AN Li-ping, ZHANG Guang-rui, ZHOU Jian-ping, WU Ding, JIA Yao-fei, YUN Xiang-dong</i>	
<b>Study on MSCs homing and its research on osteodiseases*</b> .....	689
<i>LI Wang-yang, XIONG Hui</i>	

---

\*With English abstract