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痛风性关节炎的中医治疗进展*

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摘要: 痛风是嘌呤代谢紊乱造成尿酸盐结晶沉积在皮下组织、关节周围、骨骼及尿路而引发的病变。发作时以足拇趾及踝关节红、肿、热、痛多见,呈间歇性反复发作。由于社会发展和人们生活方式的改变,痛风性关节炎患病率有明显上升和年轻化趋势,南方和沿海经济发达地区发病率尤高。痛风性关节炎作为一个常见病多发病,严重影响着患病者的生活质量,目前西医对痛风性关节炎的治疗并不能改变其病理性质,且毒副作用较大、效果不持续,临床多以排尿酸药、糖皮质激素及秋水仙碱等一些口服药物为主。近年来随着中医药对该病的研究,中医药治疗痛风性关节炎有了较大的进展,临床上取得令人乐观的成果。本文着重从中药内治及中医外治两个方面,综述了近年来痛风性关节炎中医药治疗的研究进展。

关键词: 痛风性关节炎; 中医药; 内治; 外治; 综述

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Progress of Treating Gouty Arthritis with Chinese Medicine*

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ABSTRACT: Gout is caused by disorders of purine metabolism which leads to urate Crystal deposition in subcutaneous tissue around the joints, bones and urinary tract. Attack with foot toe and ankle pain, red, swollen, hot, recurrent attacks of intermittent. Due to the social development and changes in lifestyle, gouty arthritis prevalence rate appears a clear trend of rising and young, and particularly high incidence in developed coastal areas in the South. As a common and frequently encountered disease, gout arthritis seriously influences the quality of life for patients. Western medicine for the treatment of gouty arthritis usually with oral medications, including colchicine, uricosuric drugs or appropriate use of glucocorticoids, which has short effect but huge side effects, and cannot reverse and correct pathological processes of gouty arthritis. In recent years, with studying the effect of traditional Chinese medicine against the disease, progress on TCM treatment of gouty arthritis has been achieved promising clinical results. This paper, from both internal and external treatment of traditional Chinese medicine, provides an overview of recent research progress on TCM treatment of gouty arthritis.

Key words: Gouty arthritis; Chinese medicine; Endotherapy; External treatment; Summarization

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痛风是尿酸排泄异常以及嘌呤代谢紊乱导致的疾病,通常以获得性或遗传性导致^[1],临床表现是尿酸盐结晶并沉积在软骨、滑膜等结缔组织结构中,高尿酸血症,痛风性急性关节炎反复发作、关节畸形,并且进而形成慢性间质性肾炎和尿酸性肾结石。好发于40岁以上的男性。中医认为,痛风病因多为禀赋不足,过食膏粱厚味,外感风、寒、湿之邪,致脾失健运,湿热瘀毒痰阻滞经络所致。同时将痛风关节炎分为湿热蕴结、瘀热阻滞、痰浊阻滞、肝肾阴虚、风寒湿痹五型。现就从中药内治与中医外治两方面进行探讨。

1 中药内治

张明等^[2]认为外邪侵袭、湿热壅滞是导致痛风性关节炎产生的原因,临床试验采用虎杖痛风颗粒与口服双氯芬酸钠的对照组相比较,治疗急性痛风性关节炎患者共40例,显示治疗组显著优于对照组。张春燕等^[3]以羌活茵陈汤治疗本病湿热蕴结型38例,治愈17例,好转14例,未愈7例,总有效率81.58%。吴玉霞^[4]运用痛风饮治疗急性痛风性关节炎60例,有效率

100%。宋锦华^[5]治疗痛风性关节炎40例,应用痛风速效汤(黄柏、怀牛膝、茅术、薏苡仁、丹皮等),治愈29例,好转11例,无效0例。李金龙^[6]应用当归拈痛散(防风、当归、茅术、黄柏、人参、黄芪、白术等)治疗痛风性关节炎,结果满意。孙炳忠等^[7]设口服别嘌醇、秋水仙碱对照,采用二妙散合宣痹汤化裁(黄柏、薏仁、防己、连钱草、金银花、延胡索等),共60例,治疗组总有效率为100%,对照组97.3%($P<0.05$)。郭峰等^[8]应用痛风舒颗粒(秦皮、当归等)治疗148例,治疗组临床控制率32.4%,显效33.8%,无效10.8%,有效率为66.2%。杭东辉^[9]采用健脾泄浊方加减(茅术、萆薢、薏仁、茯苓、牛膝、炙细辛、虎杖、京大戟)治疗痛风性关节炎,疗效满意。何本鸿^[10]设口服别嘌醇作对照组,运用当归痛风胶囊(川芎、川牛膝、萆薢、威灵仙、白芍、马钱子、丝瓜络、制草乌等)治疗本病,痊愈10例,显效18例,有效25例,无效3例,总有效率为94.64%,治疗组总有效率高于对照组75%($P<0.01$)。余珊珊等^[11]使用清热利湿解毒方加减(茅术、黄柏、秦艽、牛膝、忍冬藤、薏仁、蒲公英、土茯苓)治疗急性痛风性关节炎,并不同证型于不同药物加减,共40例,总有效率

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为95%,高于西药对照组(口服尼美舒利、别嘌醇)85%($P<0.05$)。且治疗组的尿酸水平明显低于对照组($P<0.05$)。赵新鸿等^[14]应用祛浊健肾胶囊(山慈菇、草薢、茅术、泽泻、薏苡仁、车前子、赤芍)治疗116例,结果治愈49例,显效32例,有效25例,无效10例,总有效率91.3%。对照组88.46%($P<0.05$)。两组对照观察,治疗组的尿酸水平较对照组明显降低($P<0.05$)。张明等^[15]采用泽苓痛风饮(土茯苓、连钱草、茵陈、泽兰、百合等)治疗本病,设口服苯溴马隆为对照组,共33例,8周后治疗组总有效率为82%,优于对照组56.2%($P<0.05$);8周后尿酸值治疗组低于治疗前及服药后4周时水平($P<0.05$)。祝明显等^[16]运用祝氏湿瘀痰消汤加味(金雀根、稀金草、黄精、臭梧桐根、虎杖等)治疗本病,并根据不同证型辩证加味,如关节红肿热痛加蚕砂、川牛膝、茅术;关节无红肿加首乌、杜仲;两组同时给予别嘌醇口服,对照组予布洛芬口服,重者给予秋水仙碱治疗,治疗组86例,治愈52例,好转28例,未愈6例,总有效率为93.02%,高于对照组65%($P<0.01$),3年内复发率低于对照组($P<0.01$)。

2 中医外治

中医药在治疗痛风性关节炎上方法多样,除了方药外,还有针刺、火罐、中药外敷、放血、穴位注射等。

2.1 中药外用

张辉等^[17]以清消止痛散(大黄、黄柏、茅术、忍冬藤、怀牛膝)外敷治疗痛风性关节炎50例,痊愈21例,显效26例,无效3例,有效率94%。殷翠娥等^[18]以金黄散加消瘀膏外敷治疗急性痛风性关节炎50例,疗程5天,显效45例,有效5例,有效率100%。

黄年斌等^[19]采用双柏散(大黄、侧柏叶、泽兰、蜂蜜等)外敷治疗急性痛风性关节炎25例,显效9例(36%),有效15例(60%),无效1例(4%),有效率(96%)。

2.2 针灸疗法

胡丰村等^[20]选取患者肿胀明显部位的经脉,采用火针点刺疗法治疗急性痛风性关节炎,深度为0.3-1.0寸,有效率85.0%。董建萍等^[21]以正清风痛宁进行穴位注射,选用阿是穴、阳陵泉、合谷、足三里、昆仑、照海、八邪等穴位治疗本病,疗效满意。光尧等^[22]单纯针刺曲池、三阴交、血海、膈俞等穴位,治疗急性痛风性关节炎46例,采用捻转泻法及平补平泻法,趾、指小关节局部以针灸点刺。治愈30例,随访1年,仅6例复发。好转12例,无效4例。戴晴^[23]以病变局部为主取穴,采用齐刺法,直针刺入,旁2针刺入,得气后留针30分钟,治疗痛风性关节炎。分别在第一跖趾关节、膝关节及上肢关节处以疼痛中心穴周转穴,配以太冲、阳陵泉、足三里、阴陵泉、曲池、外关等。有效率为90%。闰滨等^[24]普通针刺配合电针仪治疗本病,取穴犊鼻、足三里、阳陵泉、阿是穴等,配合疏密波,治疗有效率为97.5%。刘滨等^[25]采用电针加局部封闭治疗急性痛风性关节炎,对照组予口服消炎痛、别嘌醇,治疗组在止痛效果($P<0.01$)及尿酸水平($P<0.01$)明显优于对照组。顾煜等^[26]使用隔百合冰片灸治疗痛风性关节炎,与口服西药(苯溴马隆)对照组比较,治疗组在改善痛风性关节炎的症状,降低血尿酸,尿酸和血沉($P<0.05$),显示无明显副作用。

2.3 针罐结合

朱其广^[27]在阿是穴处配血海、曲池、阴陵泉等穴位,以三棱

针点刺放血配合火罐治疗痛风性关节炎,共42例,痊愈率78.57%。李扬缜^[28]以泻热解毒,清热利湿,调和气血,疏通经络为治疗原则,采用刺络治疗痛风性关节炎,选取足部穴位(照海、太冲、丘墟、足临泣、委中、解溪等),每次2-3穴,针后留罐15分钟。3天1次,5次为1个疗程,共32例,有效率达96.9%。

3 内外合治

王爱民^[29]采用内服痛风消汤剂(四妙散加味),外敷中药(大黄、青黛、黄柏、虎杖、丹皮等)治疗痛风性关节炎,痊愈40例,好转12例,有效率100%。杨泽红等^[30]内服四妙散加味,配合中药外敷(虎杖、重楼、一枝蒿、丹参等)治疗痛风性关节炎,共20例,临床治愈12例,好转8例,有效率100%。林朝海^[31]用四妙散加味内服配合双柏散外敷治疗痛风性关节炎42例,有效率达90.48%,结果显示本法对于痛风性关节炎的抗炎止痛及降尿酸有良好的临床疗效。

4 小结

近年来,随着中医药治疗痛风性关节炎的研究不断深入,中医药在改善痛风性关节炎的症状及缓解病情方面具有明显的优势,尤其是以临床病人为研究对象观察相关指标,显示中医药疗法有着肯定的疗效,且有较高安全性,复发率低^[32,33]。本课题组应用沈氏痛风方治疗痛风性关节炎取得良好临床疗效,该方是上海市名老中医沈丕安教授治疗痛风性关节炎的临床经验方,其组方为马齿苋、秦皮、络石藤、虎杖、车前子、桑白皮。马齿苋为君药,清热解毒、散血消肿;秦皮、络石藤为臣药,清热燥湿,祛风通络;虎杖、车前子,祛风利湿,清热利水,桑白皮除湿消肿,其组方精炼,配伍合理,共奏清热利湿解毒之功。本课题组前期通过与口服别嘌醇对照临床研究,结果提示沈氏痛风方在缓解关节肿胀、疼痛,降低血尿酸方面疗效显著。

沈教授认为痛风性关节炎中医病因病机为内伤、气血亏虚、外感风寒湿邪,以致痰癖、阴火流注经络,风、寒、痰、湿、热、虚交相为害,污浊凝聚,不得运行而作痛相关,受累脏腑以脾肾为甚。朱良春教授^[34]也认为痛风是浊毒淤滞血中,不得泄利所致,水谷不归正化,浊毒随之内生,滞留血中终致瘀结为患。因此根据中医的辩证施治原则本病总的治则是清热祛湿,通络止痛。

目前的临床研究中,很少采用盲法及空白对照法,且对该病的分型尚未有较统一的标准,对于作用机制的研究不够深入,具体的作用靶点仍不明确。因此,应充分利用现代化医疗研究环境,结合前人的研究成果,开展更多更全面深入的研究方向,中医药治疗痛风性关节炎必将有更新的突破。

参考文献(References)

- [1] 苏友新,陈伟宏,陈凡,等. 痛风宁颗粒对30例慢性痛风性关节炎患者血尿酸、血沉、血脂及血流变的影响[J]. 中国中医骨伤科杂志, 2005, 13(1):16-18
Su You-xin, Chen Wei-hong, Chen Fan, et al. Influence on serum uric acid, blood sedimentation, blood-lipid and blood rheology on Tongfengning granule treating 30 patients of chronic gouty arthritis[J]. Chinese Journal of traditional Chinese orthopedic and Traumatology, 2005, 13(1): 16-18
- [2] 杨惠琴. 激光穴位点射疗法对痛风急性期的疗效观察[J]. 中国中医骨伤科杂志, 2006, 14(1): 18-20
Yang Hui-qin. Laser spot therapy on therapeutic effect of acute gout

- [J]. Chinese Journal of traditional Chinese orthopedic and Traumatology, 2006, 14(1): 18-20
- [3] 欧志学, 靳嘉昌, 黄东, 等. 中西医结合治疗痛风石 12 例[J]. 中国中医骨伤科杂志, 2007, 15(10): 37-38
Ou Zhi-xue, Jin Jia-chang, Huang Dong, et al. Gout stone treated with combination of traditional Chinese and Western medicine gout in 12 cases [J]. Chinese Journal of traditional Chinese orthopedic and Traumatology, 2007, 15(10): 37-38
- [4] 张明, 朱周, 王一飞. 虎杖痛风颗粒治疗急性痛风性关节炎临床观察[J]. 上海中医药杂志, 2008, 42(6): 16-18
Zhang Ming, Zhu Zhou, Wang Yi-fei. Polygonum cuspidatum clinical observation of hu zhang gout granule in treating acute gouty arthritis [J]. Shanghai Journal of traditional Chinese medicine, 2008, 42(6): 16-18
- [5] 张春燕, 边尧鑫. 羌活茵陈汤治疗急性痛风性关节炎发作疗效观察[J]. 河北中医, 2007, 32(7): 983-984
Zhang Chun-yan, Bian Rao-xin. Effect observation of qiang huo yin chen Herba decoction in treatment of acute gouty arthritis attack curative [J]. Hebei Journal of Traditional Chinese Medicine, 2007, 32(7): 983-984
- [6] 吴玉霞. 中药治疗急性痛风性关节炎 60 例临床观察[J]. 中国保健, 2007, 15(13): 6-7
Wu Yu-xia. Clinical observation on traditional Chinese medicine in treatment of 60 cases of acute gouty arthritis [J]. China health, 2007, 15(13): 6-7
- [7] 宋锦华. 痛风速效汤治疗痛风性关节炎 40 例疗效观察[J]. 中医药导报, 2005, 11(6): 33-34
Song Jin-hua. Observation of 40 cases on treating gouty arthritis by Gout quick-acting soup [J]. Traditional Chinese medicine and Pharmacology, 2005, 11(6): 33-34
- [8] 李金龙. 当归拈痛散治疗痛风性关节炎 86 例 [J]. 中国民族民间医药, 2009, 18(5): 105
Li Jin-long. Angelica twist pain powder decoction treating 86 cases of gouty arthritis [J]. Chinese folk medicine, 2009, 18(5): 105
- [9] 孙炳忠, 汤大北. 二妙散合宣痹汤加减治疗急性痛风性关节炎 108 例[J]. 中国实用医药, 2008, 3(21): 152-153
Sun Bing-zhong, Tang Da-bei. Combination of ermiao powder and xuanbi soup decoction in treating 108 cases of acute gouty arthritis [J]. Chinese practical medicine, 2008, 3(21): 152-153
- [10] 郭峰, 钱先, 苏建明, 等. 痛风舒颗粒治疗原发性痛风性关节炎湿热蕴结证的临床研究[J]. 新中医, 2005, 37(9): 20-22
Guo Feng, Qian Xian, Su Jian-ming, et al. Clinical study of Weishu granule in treatment of primary gout arthritis accumulated damp-heat syndrome [J]. New Chinese medicine, 2005, 37(9): 20-22
- [11] 杭东辉. 健脾泄浊方治疗痛风性关节炎 26 例[J]. 四川中医, 2009, 27(8): 80
Hang Dong-hui. 26 cases of Gouty arthritis treated by jian pi xie zhu decoction [J]. Chinese medicine in Sichuan, 2009, 27(8): 80
- [12] 何本鸿. 当归痛风胶囊治疗原发性痛风 56 例[J]. 陕西中医, 2008, 29(4): 442-443
He Ben-hong. Angelica gout capsule in the treatment of 56 cases of primary gout [J]. Shaanxi journal, 2008, 29(4): 442-443
- [13] 余珊珊, 黄延荣. 清热利湿解毒法治疗急性痛风性关节炎的疗效观察[J]. 湖北中医杂志, 2008, 30(9): 32
Yu Shan-shan, Huang Yan-rong. Clinical observation on treatment of acute gouty arthritis by Method of qingre lishi jiedu [J]. Hubei Journal of traditional Chinese medicine, 2008, 3(9): 32
- [14] 赵新鸿, 李永全. 祛浊健肾胶囊治疗痛风性关节炎临床观察[J]. 河北中医, 2008, 30(4): 354-355
Zhao Xin-hong, Li Yong-quan. Clinical observation of gouty arthritis treated by quzhu jianshen capsule [J]. Hebei Journal of Traditional Chinese Medicine, 2008, 3(4): 354-355
- [15] 张明, 王一飞, 刘胜芬. 泽苓痛风饮治疗痛风性关节炎间歇期低排泄型高尿酸血症 33 例[J]. 陕西中医, 2008, 29(8): 1000-1002
Zhang Ming, Wang Yi-fei, Liu Sheng-fen. Ze Ling decoction in treating 33 patients with hyperuricemia of gouty arthritis with interval low excretion [J]. Shaanxi journal, 2008, 29(8): 1000-1002
- [16] 祝明显, 何海军, 徐安燕. 祝氏湿痰消汤治疗痛风性关节炎 86 例[J]. 中国民间疗法, 2007, 15(10): 29
Zhu Ming-xian, He Hai-jun, Xu An-yan. Elimination dampness and blood stasis and phlegm decoction in the treatment of 86 cases of gouty arthritis [J]. Chinese folk medicine, 2007, 15(10): 29
- [17] 张辉, 高岚, 肖雷. 清消止痛散外敷治疗痛风性关节炎 50 例 [J]. 中国中医药信息杂志, 2009, 16(2): 60
Zhang Hui, Gao Lan, Lei Xiao. External application of Qing Xiao ease-pain powder in the treatment of 50 cases of gouty arthritis [J]. Chinese Journal of information on traditional Chinese medicine, 2009, 16(2): 60
- [18] 殷翠城, 甘红. 金黄散加消瘀膏治疗痛风急性发作[J]. 湖北中医杂志, 2005, 27(5): 45
Yin Cui-e, Gan Hong. Golden powder Xiaoyu ointment in the treatment of acute attacks of gout [J]. Hubei Journal of traditional Chinese medicine, 2005, 27(5): 45
- [19] 黄年斌, 龙允杰, 杨晓文. 双柏散外敷治疗急性期痛风性关节炎 25 例临床观察[J]. 中国中医急症, 2005, 14(7): 629-630
Huang Nian-bin, Long Yun-jie, Yang Xiao-wen. Clinical observation of 25 cases on treatment of acute gouty arthritis by external application of shuangbai powder [J]. Journal of Emergency in Traditional Chinese Medicine, 2005, 14(7): 629-630
- [20] 胡丰村, 陈飞, 郑润杰, 等. 火针点刺放血疗法治疗急性痛风临床观察[J]. 中医正骨, 2007, 19(1): 9-10
Hu Feng-cun, Chen Fei, Zheng Run-jie, et al. Clinical observations on pricking blood therapy by Fire needle prick for treatment of acute gout [J]. Traditional Chinese medicine orthopaedic, 2007, 19(1): 9-10
- [21] 董建平, 麻弘. 穴位注射正清风痛宁治疗痛风性关节炎 30 例疗效观察[J]. 黑龙江中医药, 2002, 37(1): 50
Dong Jian-ping, Ma Hong. Observation of 30 cases of Acupoint injection in treating gouty arthritis with zhengqing fengtongning [J]. Heilongjiang Chinese medicine, 2002, 37(1): 50
- [22] 解光尧, 陈允利. 针刺治疗痛风性关节炎 46 例的临床观察[J]. 浙江中医学院学报, 2003, 27(3): 63
Jie Guang-yao, Chen Yun-li. Clinical observation of 46 cases on acupuncture for treatment of gouty arthritis [J]. Journal of Zhejiang College of traditional Chinese medicine, 2003, 27(3): 63
- [23] 戴晴. 齐刺为主治疗急性痛风性关节炎 34 例[J]. 浙江中医学院学报, 2003, 27(5): 64-65
Dai Qing. 34 cases of acute gouty arthritis treated mainly with triple puncture [J]. Journal of Zhejiang College of traditional Chinese medicine, 2003, 27(5): 64-65
- [24] 闰滨, 李毛明, 邓一明. 电针灸治疗急性痛风性关节炎 70 例[J]. 昆明

- 医学院学报, 2007, (1): 117-118
- Run Bin, Li Mao-ming, Deng Yi-ming. 70 cases of acute gouty arthritis treated by electro-acupuncture [J]. Journal of Kunming Medical College, 2007, (1): 117-118
- [25] 刘滨, 王红梅, 士凤艳. 电针合局部封闭治疗急性痛风性关节炎疗效观察[J]. 中国针灸, 2008, 28(9): 659-661
- Liu Bin, Wang Hong-mei, Shi Feng-yan. Observation on treatment of acute gouty arthritis by electro-acupuncture and partially closed method [J]. Chinese Acupuncture and moxibustion, 2008, 28 (9): 659-661
- [26] 顾煜, 王伟明. 隔百合冰片饼灸治疗痛风性关节炎临床观察[J]. 上海中医药杂志, 2008, 42(4): 44-45
- Gu Yu, Wang Wei-ming. Clinical observation of lily borneol cake separated moxibustion for treatment of gouty arthritis [J]. Shanghai Journal of traditional Chinese medicine, 2008, 42 (4): 44-45
- [27] 朱其广. 点刺放血配合拔罐治疗急性痛风性关节炎 42 例[J]. 中医外治杂志, 2008, 17(2): 43
- Zhu Qi-guang. Prick blood with cupping in treating 42 cases of acute gouty arthritis [J]. Journal of external therapy of traditional Chinese medicine, 2008, 17 (2): 43
- [28] 李扬缜. 刺络治疗痛风性关节炎 32 例[J]. 中国针灸, 2006, 26(2): 150
- Li Yang-zhen. Pricking for treatment of 32 cases of gouty arthritis [J]. Chinese Acupuncture and moxibustion, 2006, 26 (2): 150
- [29] 王爱民. 痛风消配合中药外敷治疗急性痛风性关节炎例[J]. 陕西中医, 2007, 28(8): 1011
- Wang Ai-min. Gout decoction combined with external application of Chinese herbs in the treatment of acute gouty arthritis [J]. Shaanxi Journal of Traditional Chinese Medicine, 2007, 28 (8): 1011
- [30] 杨泽红, 周春东. 中药内外合治痛风 20 例[J]. 云南中医中药杂志, 2008, 29(1): 19
- Yang Ze-hong, Zhou Chun-dong. 20 cases of gout arthritis treated by internal and external treatment of traditional Chinese medicine [J]. Yunnan Journal of traditional Chinese medicine, 2008, 29 (1): 19
- [31] 林朝海. 四妙散加减配合双柏散外敷治疗急性痛风性关节炎 42 例[J]. 湖南中医杂志, 2009, 29(7): 711-712
- Lin Chao-hai. Simiao powder combined with external application of shuangbai powder in treating 42 cases of acute gouty arthritis [J]. Hunan Journal of traditional Chinese medicine, 2009, 29 (7): 711-712
- [32] 王育东. 消痰止痛法治疗痛风性关节炎 78 例. [J] 中国中医骨伤科杂志, 2007, 15(4): 50
- Wang Yu-dong. Treatment of 78 cases of gouty arthritis by Xiao Yu Zhi Tong method [J]. Chinese Journal of traditional Chinese orthopedic and Traumatology, 2007, 15 (4): 50
- [33] 刘挺, 刘元禄, 高岱, 等. 痛风定胶囊对实验性骨髓组织 IL-8 和 TNF- α 影响的研究[J]. 中国中医骨伤科杂志, 2005, 13(1): 24-26
- Liu Ting, Liu Yuan-lu, Gao Dai, et al. study on effects of experimental periosteal tissue IL-8 and TNF-alpha by Gout capsule [J]. Chinese Journal of traditional Chinese orthopedic and Traumatology, 2005, 13 (1): 24-26
- [34] 李靖. 朱良春治疗痹证验案 2 则[J]. 江苏中医药, 2012, 1(10): 51-52
- Li Jing. Pro 2 of Zhu Chunliang on treating rheumatism diseases [J]. Jiangsu Journal of Traditional Chinese Medicine, 2012, 1 (10): 51-52

(上接第 5578 页)

- [16] Choi J, Park SY, Joo CK. Hepatocyte growth factor induces proliferation of lens epithelial cells through activation of ERK1/2 and JNK/SAPK [J]. Invest Ophthalmol Vis Sci, 2004, 45: 2696-2704
- [17] Jiang Q, Zhou C, Wan Y. EGF-induced cell migration is mediated by ERK and PI3K/AKT pathways in cultured human lens epithelial cells [J]. J Ocul Pharmacol Ther, 2006, 22: 93-102
- [18] Lemaire V, D'Armiento J. Matrix metalloproteinases in development and disease [J]. Birth Defects Res C Embryo Today, 2006, 78: 1-10
- [19] Wilson ME Jr, Trivedi RH. The ongoing battle against posterior capsular opacification [J]. Arch Ophthalmol, 2007, 125: 555-556
- [20] Davidson MG, Morgan DK, McGahan MC. Effect of surgical technique on in vitro posterior capsule opacification [J]. J Cataract Refract Surg, 2000, 26: 1550-1554
- [21] Maloof AJ, Pandey SK, Neilson G, et al. Selective death of lens epithelial cells using demineralized water and Triton X-100 with Perfect Capsule sealed capsule irrigation: a histological study in rabbit eyes [J]. Arch Ophthalmol, 2005, 123: 1378-1384
- [22] Hara T. Preventing posterior capsular opacification with an endocapsular equator ring in a young human eye: 2-year follow-up [J]. Arch Ophthalmol, 2007, 125: 483-486
- [23] Werner L. Biocompatibility of intraocular lens materials [J]. Curr Opin Ophthalmol, 2008, 19: 41-49
- [24] Yammine P, Pavon-Djavid G, Helary G, et al. Surface modification of silicone intraocular implants to inhibit cell proliferation [J]. Biomacromolecules, 2005, 6: 2630-2637
- [25] Nishi O, Nishi K, Akura J. Speed of capsular bend formation at the optic edge of acrylic, silicone, and poly (methyl methacrylate) lenses [J]. J Cataract Refract Surg, 2002, 28: 431-437
- [26] Walker JL, Wolff IM, Zhang L, et al. Activation of SRC kinases signals induction of posterior capsule opacification [J]. Invest Ophthalmol Vis Sci, 2007, 48: 2214-2223
- [27] Awasthi N, Wang-Su ST, Wagner BJ. Downregulation of MMP-2 and -9 by pro tease inhibitor: a possible mechanism to decrease LEC migration and prevent posterior capsular opacification [J]. Invest Ophthalmol Vis Sci, 2008, 49: 1998-2003
- [28] Kim SY, Kim JH, Choi JS, et al. Comparison of posterior capsular opacification in rabbits receiving either mitomycin-C or distilled water for sealed capsule irrigation during cataract surgery [J]. Clin Experiment Ophthalmol, 2007, 35: 755-758