

doi: 10.13241/j.cnki.pmb.2017.16.031

右归丸与液体钙片对老年骨质疏松症患者血清雌激素和骨钙素水平的影响 *

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摘要 目的:研究右归丸联合液体钙片对老年骨质疏松症患者血清雌激素水平、骨钙素(BGP)水平及临床疗效的影响。**方法:**选取2014年10月至2015年9月本院收治的82例老年骨质疏松症患者,根据入院顺序分为观察组和对照组,每组41例。对照组使用骨化三醇软胶囊和液体钙软胶囊进行治疗,观察组在此基础上加以右归丸进行治疗。比较两组患者治疗前和治疗1个月后血清雌二醇(E2)水平、BGP水平、骨密度变化,分析两组患者的临床疗效。**结果:**治疗后,观察组的血清E2水平显著高于对照组($P<0.05$),BGP水平显著低于对照组($P<0.05$),腰椎L1-4正位、右侧股骨颈、左侧股骨颈骨密度显著高于对照组($p<0.05$),总临床有效率显著高于对照组($P<0.05$)。**结论:**右归丸联合液体钙片治疗老年骨质疏松症患者能明显改善患者血清雌激素、BGP水平,增加骨密度,临床疗效良好。

关键词:右归丸;液体钙片;骨质疏松症;血清雌激素;骨钙素

中图分类号:R683 **文献标识码:**A **文章编号:**1673-6273(2017)16-3122-03

Effect of Yougui Wan Combined with Liquid Calcium on the Serum Levels of Estrogen and Bone gla Protein in the Elderly Patients with Osteoporosis*

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ABSTRACT Objective: To study the clinical efficacy of yougui wan combined with liquid calcium in the treatment of elderly osteoporosis patients and the effect on levels of serum estrogen and bone gla protein (BGP). **Methods:** 82 elderly patients with osteoporosis who were treated in our hospital from October 2014 to September 2015 were selected as the object, according to the order of admission, those patients were divided into the observation group and control group, 41 cases in each group. The control group was treated with calcitriol soft capsule and liquid calcium soft capsule, and the observation group was treated with Yougui Wan on the basis of control group. The levels of serum estradiol (E2), BGP and bone mineral density (BMD) were compared between the two groups before and after treatment. The clinical efficacy of the two groups was analyzed. **Results:** After treatment, the E2 level in the observation group was significantly higher than that of the control group ($P<0.05$), the BGP level was significantly lower than that of the control group ($P<0.05$). The BMD of lumbar spine L1-4 orthostatic, right femoral neck, left femoral neck of observation group were significantly higher than those of the control group ($P<0.05$). The total clinical efficacy rate in the observation group was significantly higher than that of the control group ($P<0.05$). **Conclusion:** The combination of Yougui Wan and liquid calcium could improve the serum estrogen and BGP levels, increase the bone density, improve the clinical efficacy in the treatment of elderly patients with osteoporosis.

Key words: Yougui Wan; Liquid calcium; Osteoporosis; Serum estrogen; Bone gla protein

Chinese Library Classification(CLC): R683 **Document code:** A

Article ID: 1673-6273(2017)16-3122-03

前言

骨质疏松是一种全身性疾病,主要表现为骨组织微细结构破坏、低骨量,增加脆性和骨折的风险性^[1]。骨质疏松发病以老年人为主,近年来随着我国老龄化趋势不断增加,骨质疏松的发病率也不断升高^[2]。此疾病会给患者的生活质量及身体健康带来严重影响,甚至会危及患者生命安全^[3]。在祖国医学中,将骨质疏松症纳入"骨枯"、"骨痹"、"痿证"范畴,其中常常

将肾精亏虚而导致的骨髓失养视为此病的主要病因^[4]。右归丸具备益精养血、温阳补肾功能。为给临床在治疗老年骨质疏松症中提供更多可借鉴之处,本研究就右归丸联合液体钙片对老年骨质疏松症患者血清雌激素水平、骨钙素(BGP)水平及临床疗效影响予以探讨,报道如下。

1 资料与方法

1.1 临床资料

* 基金项目:陕西省社会发展科技攻关项目(2015SF115)

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(收稿日期:2016-11-13 接受日期:2016-11-30)

选取 2014 年 10 月到 2015 年 9 月我院收治的 82 例老年骨质疏松症患者,所有患者均符合《临床诊疗指南·骨质疏松症和骨矿盐疾病分册》^[5]中的诊断标准。纳入标准:① 所有患者均通过双能 X 线骨密度测定仪进行测量,提示存在骨质疏松;② 伴有自发性负重痛和腰背痛;③ 所以患者无雌激素治疗史;④ 依从性较好,患者自愿加入本次试验。排除标准:① 近 2 个月内服用过会对骨代谢造成影响的药物;② 心脑血管等重要脏器严重疾病者;③ 甲状腺机能亢进;④ 风湿性关节炎。本次研究已获得了患者及其家属的知情同意,相应的取得了本院伦理委员会的批准。根据患者入院顺序将本次研究对象分为观察组和对照组两组,41 例每组。其中观察组中年龄为 58~78 岁,平均(68.94±1.44)岁;BMI 为 23~26 kg/m²,平均(24.76±0.23)kg/m²。对照组中年龄为 59~77 岁,平均(69.02±1.46)岁;BMI 为 22~27 kg/m²,平均(25.11±0.26) kg/m²。两组患者在年龄等临床资料方面比较无差异性(P>0.05),具有可比性。

1.2 治疗方法

对照组采取常规治疗,使用骨化三醇软胶囊(生产厂家:青岛正大海乐制药有限公司,规格:0.25 μg×10s(盖三淳),生产批号:20140403)进行治疗,口服,1 s/次,1 次/天;口服液体钙软胶囊(生产厂家:广东汤臣倍健生物科技股份有限公司,规格:1000 mg×100 粒,生产批号:20140511),1000 mg/次,2 次/天。观察组患者在对照组治疗基础上加以右归丸(生产厂家:河南省宛西制药股份有限公司,规格:45 g,生产批号:20140502)进行治疗,口服,45 g/次,3 次/天。所有患者均需连续治疗 1 个月。

1.3 观察指标

比较两组患者治疗前和治疗 1 个月后血清雌激素水平、

BGP 水平,分别在患者治疗前和治疗 1 个月后抽取 5mL 的空腹静脉血,转速 2500r/min,离心 15min,对血清进行分离,使用放免法对 BGP 水平进行检测,由天津德普生物技术有限公司提供试剂盒;使用美国 Lunar 公司所生产的雌二醇(Estradiol, E2)试剂盒对血清雌二醇含量进行检测。

在治疗前和治疗 1 个月对患者的骨密度进行测量,双能 X 线骨密度仪的型号为 QDR-2000+ 型,由美国 Hologic 公司提供,测量部位包括腰椎 L1-4 正位、右侧股骨颈、左侧股骨颈。

评价两组患者治疗后的临床疗效^[6],评价标准如下:经治疗后,患者椎体骨密度和治疗前相比明显提高,腰酸背痛、腰膝酸软等症完全消失则为显效;经治疗后,患者椎体骨密度和治疗前相比稍微改善,腰酸背痛、腰膝酸软等临床症状明显缓解或显示则为有效;经治疗后,患者椎体骨密度未发生任何变化,并且临床症状无改善则为无效。

1.4 统计学处理

本次实验数据处理选择 SPSS11.5 软件包进行,用($\bar{x} \pm s$)形式来表示计量资料,采用 t 检验,用[n(%)]对计数资料进行表示,并进行 χ^2 检验,其 P<0.05 表明差异具有统计学意义。

2 结果

2.1 两组患者治疗前后血清雌激素水平、BGP 水平比较

治疗前,两组患者的血清 E2、BGP 水平比较差异无统计学意义(P>0.05);治疗后,两组患者的 E2 水平较治疗前显著升高(P<0.05),BGP 水平较治疗前显著降低(P<0.05),其中观察组的 E2 水平显著高于对照组(P<0.05),BGP 水平显著低于对照组(P<0.05),见表 1。

表 1 两组患者治疗前后血清雌激素、BGP 水平比较($\bar{x} \pm s$)

Table 1 Comparison of the serum levels of estrogen and BGP between two groups before and after treatment($\bar{x} \pm s$)

Groups	Time	E2(pg·mL ⁻¹)	BGP(ng·mL ⁻¹)
Observation group(n=41)	Before treatment	41.21± 4.21	12.87± 1.43
	After treatment	49.54± 5.32**	8.32± 0.57**
Control group(n=41)	Before treatment	41.27± 4.24	12.89± 1.45
	After treatment	45.64± 4.76*	10.34± 0.98*

Note: E2: Estradiol; BGP: Bone Gla Protein

Compared with before treatment, *P<0.05; Compared with control group after treatment, **P<0.05.

2.2 两组患者治疗前后骨密度比较

治疗前,两组患者的腰椎 L1-4 正位、右侧股骨颈、左侧股骨颈骨密度比较无显著性差异(P>0.05);治疗后,两组患者的腰

椎 L1-4 正位、右侧股骨颈、左侧股骨颈骨密度较治疗前显著增加(P<0.05),其中观察组的腰椎 L1-4 正位、右侧股骨颈、左侧股骨颈骨密度显著高于对照组(p<0.05),见表 2。

表 2 两组患者治疗前后骨密度比较($\bar{x} \pm s$, g/cm²)

Table 2 Comparison of the bone mineral density between the two groups before and after treatment ($\bar{x} \pm s$, g/cm²)

Groups	Time	Lumbar L1-4 anteroposterior	Right femoral neck	Left femoral neck
Observation group(n=41)	Before treatment	0.67± 0.08	0.59± 0.05	0.64± 0.08
	After treatment	0.91± 0.09**	0.79± 0.07**	0.82± 0.11**
Control group(n=41)	Before treatment	0.68± 0.07	0.60± 0.04	0.65± 0.07
	After treatment	0.79± 0.08*	0.71± 0.05*	0.76± 0.09*

Note: Compared with before treatment, *P<0.05; Compared with control group after treatment, **P<0.05.

2.3 两组患者临床疗效比较

(37/41)比 63.41%(26/41)]($P<0.05$),见表 3。

治疗后, 观察组总的临床有效率显著比对照组高[90.24%

表 3 两组患者临床疗效比较[例(%)]

Table 3 Comparison of the clinical efficacy between the two groups[n(%)]

Groups	Markedly	Effective	Invalid	Total effective rate
Observation group(n=41)	28(68.29)	9(21.95)	4(9.76)	37(90.24)*
Control group(n=41)	8(19.51)	18(43.90)	15(36.59)	26(63.41)

Note: Compared with the control group,* $P<0.05$.

3 讨论

骨质疏松症主要表现为骨微细结构破坏、骨小梁断裂、骨骼骨量降低等, 患者一旦发生骨质疏松后极易出现骨折现象, 给患者生活质量及人类健康带来严重威胁^[7]。伴随着我国老龄化趋势的不断增加, 也随之增加了骨质疏松的发病率。在中医学中并没有骨质疏松症这一病名, 然而在黄帝内经中已提出了腰痛这一概念, 其中骨缩病、肾痹、骨痹、骨极、骨蚀、骨枯、骨痿等名词类似于骨质疏松^[8]。本虚标实作为本病的病因病机, 活血止痛、温经通络、强筋壮骨、益气补肾、标本兼顾是治疗此病的主要治疗方案^[9,10]。在中医学中提出了“肾主骨生髓”概念, 其中肾脏功能和骨骼的生长发育存在密切关联性^[11]。而右归丸主要有填精益髓、温补肾阳功效, 近年来在骨质疏松症中已得到逐渐应用^[12]。右归丸主要由鹿角胶、菟丝子、山茱萸、山药、熟地、肉桂、附子等良药组合而成, 其中鹿角胶、菟丝子具有补肾温阳功效, 在充骨生髓中具有极其良好的效果, 能有效改善肾脏功能; 山茱萸、山药、熟地具有益精生髓、滋补肝肾作用; 肉桂、附子具有养血填精、温阳补肾作用^[13,14]。诸药联合在一起制作成右归丸, 发挥填精益髓、温补肾阳功效。

卵巢的黄体期和卵泡分泌雌激素, 其中雌二醇的生理活性最强, 在研究对骨代谢造成严重影响的雌激素指标中常常将雌二醇主要的测量指标^[15]。在骨形成中, BGP 具有重要反馈作用, 可有效阻碍异常磷灰石晶体的形成, 进而对生产软骨矿化造成抑制性影响^[16]。相关研究者提出 BGP 活性的增加, 则表明骨转化较为活跃, 并且发现在正常人群中的 BGP 水平要明显比骨质疏松症患者的 BGP 水平低, 因此在诊断骨质疏松症中将 BGP 指标纳入其中具有重要临床价值^[17-19]。本次研究结果显示右归丸联合液体钙治疗的老年骨质疏松症患者血清 E2 水平较治疗前显著提高, 并且治疗后 E2 水平明显比常规治疗者高, BGP 水平显著降低, 提示右归丸联合液体钙片能改善骨质疏松症患者血清雌激素水平和 BGP 水平。

在诊断骨质疏松症中, 将骨密度常常被作为主要标志, 并且能有效衡量骨质疏松症的治疗效果^[20]。本研究通过对老年骨质疏松症患者予以右归丸联合液体钙片治疗后, 结果显示患者的腰椎 L1-4 正位、右侧股骨颈、左侧股骨颈骨密度显著提高, 其升高幅度明显优于常规治疗者, 并且总的临床疗效高至 90.24%, 明显高于常规治疗者, 表明右归丸联合液体钙片能提高骨密度, 进而逆转骨代谢障碍所导致的骨吸收, 有效缓解骨质疏松症状。

总之, 右归丸联合液体钙片治疗老年骨质疏松症患者能明显改善患者血清雌激素、BGP 水平, 增加骨密度, 临床疗效良好。

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