

成人侏儒症患者骨密度检测结果及分析

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摘要: 目的 检测成人侏儒症患者腰椎、右髋、左髋骨密度值,与正常同龄人体检组相比较,探讨成人侏儒症患者与骨质疏松的相关性。方法 采用法国 MEDI MINK 公司生产的 OSTEOCORE 3 双能 X 线骨密度检测仪检测 28 例成人侏儒症患者腰椎、左髋、右髋骨密度,求出均值,以最低值作为诊断依据,并随机选出 38 例体检的正常同龄人予以对比。结果 患病组与对照组两组相比,年龄无差异, $P = 0.13 > 0.005$; 身高有显著性差异, $P = 0.000 < 0.005$; 体重有显著性差异, $P = 0.000 < 0.005$; 腰椎骨密度均值有显著性差异, $P = 0.000 < 0.005$; 右髋骨密度均值有显著性差异, $P = 0.000 < 0.005$; 左髋骨密度均值有显著性差异, $P = 0.000 < 0.005$ 。28 例侏儒症患者中骨量正常 0 例,占 0%、骨量减少 4 例,占 14.29%、骨质疏松 24 例,占 85.71%、其中骨质疏松中达严重骨质疏松者 12 例。结论 成人侏儒症患者骨量减少合骨质疏松患病率达 100%,无一例骨密度正常,要高度重视这一特殊人群的骨骼健康。

关键词: 侏儒症; 骨密度; 骨质疏松

The test results and analysis of bone mineral density in adult dwarfism

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Abstract: **Objective** To measure the bone mineral density of the lumbar vertebrae, the right iliac, and the left iliac in adult patients with dwarfism, comparing that with normal people of the same age, and to investigate the correlation between adult dwarfism and osteoporosis. **Methods** The bone mineral density of the lumbar vertebrae, the right iliac, and the left iliac were measured in 28 adult patients with dwarfism using Osteocore 3 dual-energy X-ray absorptiometry (MED MINK Co., France). The mean value was calculated and the lowest value was set as diagnosis criteria. Meanwhile, 38 normal people of the same age were randomly selected. The bone mineral density was also measured and compared. **Results** There was no significant difference of age between 2 groups ($P > 0.05$), while both the height and the weight in two groups showed significant difference ($P < 0.005$). The bone mineral density of the lumbar vertebrae, the right iliac, and the left iliac between two groups showed significant difference ($P < 0.005$). Among 28 adult patients with dwarfism, none of them had normal bone mass. Four patients had reduced bone mass (14.29%), and 24 patients had osteoporosis (85.71%). Twelve out of 24 patients had serious osteoporosis. **Conclusion** The prevalence of reduced bone mass combined with osteoporosis in adult patients with dwarfism is 100%. None patient has normal bone mass. It is very important to focus on bone health in adult dwarfism.

Key words: Dwarfism; Bone mineral density; Osteoporosis

所谓侏儒或身材矮小,是指在相似环境下同种族的儿童较正常的同龄、同性别的人群身高均值低 2 个标准差以上或处于第 3 百分位以下^[1]。成人侏儒症是指青春期后身高明显矮小,低于 130 cm^[2]。本研究检测了 28 例成人侏儒症患者的骨密度并与

正常人群进行对比,结果报告如下:

1 资料和方法

1.1 临床资料

28 例患者全部来自 2012 年在我院门诊就诊侏儒症患者,符合侏儒症诊断标准,其中男性 20 例,女性 8 例,年龄在 18 ~ 50 岁,平均年龄 29.57 岁。对

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照组来自同期在我院门诊体检者共 38 例,男性 26 例,女性 12 例,年龄在 21~59 岁,平均年龄 32.76 岁。均排出长期或大剂量使用激素、长期消化系统疾病、近期服用影响骨代谢药物等患者。

1.2 诊断标准

1.2.1 侏儒症诊断标准:依据《实用内科学》(第 12 版)^[2] 身高低于 130 cm 可诊断为侏儒症。

1.2.2 骨质疏松症诊断标准:中国人群骨质疏松诊疗指南(2004 年版)^[3] 参考世界卫生组织(WHO)标准,结合我国国情,以种族、性别、地区的峰值骨量(均值为 M)为依据:

≥ M-1SD 正常

M-1SD ~ -2SD 骨量减少

< M-2SD 骨质疏松症

< M-2SD 伴有一处或多处骨折,为严重骨质疏松症

< M-3SD 无骨折,也可诊断为严重骨质疏松症

1.3 方法

疾病组与对照组均采用法国 MEDI MINK 公司生产的 OSTEOCORE 3 双能 X 线骨密度检测仪检测腰椎、左髌、右髌骨密度,系统自动求出均值,以 Z 值比较两组骨密度,以最低 T 值作为诊断依据,计算骨质疏松发病率。

1.4 统计学分析

数据用 SPSS17.0 软件进行统计学处理分析,测量值用均数 ± 标准差 ($\bar{x} \pm s$) 表示,两组资料采用 *t* 检验。

2 结果

2.1 患病组与对照组年龄、身高、体重的比较

两组相比,年龄无差异, $P = 0.13 > 0.005$; 身高有显著性差异, $P = 0.000 < 0.005$; 体重有显著性差异, $P = 0.000 < 0.005$ 。见表 1。

表 1 患病组与对照组年龄、身高、体重比较

Table 1 Comparison of the age, height, and weight of the subjects between adult dwarfism group and control group

	年龄 Age (Years)		身高 Height (cm)		体重 Weight (kg)	
	疾病组 Adult dwarfism	对照组 Control group	疾病组 Adult dwarfism	对照组 Control group	疾病组 Adult dwarfism	对照组 Control group
N	28	38	28	38	28	38
$\bar{x} \pm s$	29.5714 ± 10.6334	32.7632 ± 6.1925	115.75 ± 9.7511	166.3421 ± 7.5919	39.1786 ± 7.4637	63.6579 ± 15.05
F	2.350		1774.676		62.548	
P	0.130		0.000		0.000	

2.2 患病组与对照组骨量正常、骨量减少、骨质疏松百分比情况

28 例侏儒症患者中骨量正常 0 例,占 0%、骨量减少 4 例,占 14.29%、骨质疏松 24 例,占 85.71%、其中骨质疏松中达严重骨质疏松者 12 例,对照组 38 例,骨量正常 19 例,占 50%、骨量减少 16 例,占 42.11%、骨质疏松 3 例,占 7.89 例。

2.3 患病组与对照组腰椎、左髌、右髌骨密度检测结果比较

两组比较,腰椎骨密度均值有显著性差异, $P = 0.000 < 0.005$; 右髌骨密度均值有显著性差异, $P = 0.000 < 0.005$; 左髌骨密度均值有显著性差异, $P = 0.000 < 0.005$ 。见表 2。

表 2 患病组与对照组腰椎、左髌、右髌骨密度检测结果比较

Table 2 Comparison of the bone mineral density of the lumbar vertebrae, the right iliac, and the left iliac between adult dwarfism group and control group

	腰椎 Lumbar		右髌 Right iliac		左髌 Left iliac	
	疾病组 Adult dwarfism	对照组 Control group	疾病组 Adult dwarfism	对照组 Control group	疾病组 Adult dwarfism	对照组 Control group
N	28	38	28	38	28	38
$\bar{x} \pm s$	0.6301 ± 0.1708	0.8915 ± 0.0980	0.6112 ± 0.1555	0.8212 ± 0.1001	0.6241 ± 0.1470	0.8441 ± 0.0916
F	61.661		55.859		44.293	
P	0.000		0.000		0.000	

3 讨论

侏儒症的病因吴瑾等学者^[4]认为,侏儒症涉及内分泌、遗传、代谢、神经、外科、营养、产科、精神、心理、生物、化学、临床检验、声像学、放射和地理管理等多学科,种类繁多。以往大量的研究侧重于婴幼儿矮小的病因诊断^[5,6],治疗以尽可能改善身高为目的,如生长激素治疗^[7]、基因治疗^[8]、手术治疗^[9]、中医中药治疗^[10]等等,而鲜见对成人侏儒症的研究。本研究通过对 28 例侏儒症患者进行腰、左髌、右髌双能 X 线骨密度检测,发现骨质疏松的发生率为 85.71%,骨量减少的发生率为 14.29%,骨质疏松和骨量减少的发生率为 100%,无一例骨密度正常。与对照组相比,年龄无差异,身高、体重、腰椎骨密度、右髌骨密度、左髌骨密度均有显著差异。曹来宾^[5]认为侏儒因发病原因不同,临床表现各异并各有其特点,但不论其类型如何,其病理基础都是由于骨关节的发育障碍所致,侏儒症患者有一个典型的临床表现——骨骼发育不全,患者骨骼 X 线检查提可见软骨发育不全、假性软骨发育不全、软骨发生不全、软骨发育低下、多发性骨骺发育不良、软骨外胚层发育不良、晚发型脊柱骨骺发育不良、脊柱骨骺发育不良并进行性关节病、致密性骨发育不全、成骨不全、多发性内生软骨瘤病、脊柱发育畸形等,加之内分泌、营养、锻炼因素造成侏儒症患者骨质疏松的病理、生理基础。

由此可见,骨质疏松是严重影响成年侏儒症患者健康的一大疾病,婴幼儿期甚至围产期的诊断、治疗是以尽可能预防侏儒、增加身高、改变侏儒状况为主,在成人侏儒症患者的治疗要以加强骨骼健康、预防骨折、加强心理治疗、加强自食其力能力的培养,提高生存质量为主。

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