

• 病例报告 •

# 注射性臀部异位骨化症 4 例报告

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**【摘要】 目的:**探讨注射性臀肌骨化症的发病机制与治疗。**方法:**自 2006 年 4 月至 2011 年 5 月采用手术方法治疗了 4 例注射性臀部异位骨化症患者, 均为老年女性, 年龄 67~76 岁, 平均 71 岁; 均为双侧患病, 表现为双侧臀部疼痛, 可用手触及结节状物, 质硬; X 线、CT、病理检查均符合异位骨化症表现。其中 2 例采用全部切除骨化组织加局部挛缩粘连软组织松解, 另 2 例采用部分切除加局部软组织松解。**结果:**术后所有患者伤口愈合良好, 无并发症发生。所有患者均获随访, 时间 2~64 个月, 平均 26 个月。患者切除部位可触及肿块及疼痛均消失。**结论:**注射性臀部异位骨化症是注射苯甲醇等药物后发生在成年人的药物性反应, 部分或全部切除痛性肿块、松解局部臀肌筋膜等软组织是治疗该病的关键。

**【关键词】** 注射, 肌肉内; 异位骨化; 外科手术

**DOI:** 10.3969/j.issn.1003-0034.2012.10.019

**A report of 4 cases about gluteal heterotopic ossification caused by injection** XU Jun-ling, SHANG Shu-lan, YU Guo-sheng, ZHANG Da-fu, LIU Yu-qin. The 8th Department of Orthopaedics, Cangzhou Hospital of TCM and Western Medicine, Cangzhou 061000, Hebei, China

**ABSTRACT Objective:**To study the pathogenesis and treatment of gluteal heterotopic ossification caused by injection. **Methods:**From April 2006 to May 2011, 4 old female patients with gluteal heterotopic ossification caused by injection were treated by resection. The average age was 71 years old ranging from 67 to 76. The illness were bilateral, the clinical character was pain and hard nodules in the both hip. The X-ray, CT and pathology matched the diagnosis of heterotopic ossification. Two of them were treated by totally removing the ossified tissues, and loosening the spastic and adhesive soft tissues. The other two were treated with local resection and soft-tissue lysis. **Results:**The wound of all patients healed well, and there were no complication. All patients were followed-up from 2 to 64 months (averaged 26 months). There were no lump and pain in the location of surgical resection. **Conclusion:**Gluteal heterotopic ossification caused by injection is the drug reaction produced by injecting benzyl alcohol or other drugs, and happens in adults. The key for the treatment is to remove part or all of the painful lump, and loose the local fascia and other soft tissues of the gluteal muscles.

**KEYWORDS** Injections, intramuscular; Heterotopic ossification; Surgical procedures, operative

Zhongguo Gu Shang/China J Orthop Trauma, 2012, 25(10):864-865 www.zggszz.com

髋部软组织骨化较为常见, 多与外伤及手术等创伤因素有关, 而注射性异位骨化症较为少见, 常与药物对局部的刺激有关, 自 2006 年 4 月至 2011 年 5 月共治疗 4 例, 总结报告如下。

## 1 临床资料

本组 4 例患者均为女性, 年龄 67~76 岁, 平均 71 岁。致病原因: 1 例年轻时经常感冒发烧, 常以注射用苯甲醇稀释的青霉素肌注, 另 3 例均在年轻时患过肺炎、上呼吸道感染等, 有经常注射抗生素的病史。临床表现: 双侧臀部疼痛, 可用手触及结节状物, 质硬, X 线片显示: 髂骨翼后侧多发散在的斑片状及环形高密度影, 该影与骨质的密度相似, 呈现外周密度高, 中央密度低, 似有髓腔(图 1)。CT 显示: 高密

度影位于髂骨翼的后外侧, 位于皮下与肌层之间, 可分辨出高密度影内有类似髓腔的结构(图 2)。病理检查诊断为慢性炎症, 瘤样钙质沉着, 伴钙化、骨化(图 3)。

## 2 治疗方法

4 例患者均采用了手术治疗, 麻醉方法为腰麻。手术切口采用髋关节后外侧切口, 其中 2 例采用骨化物全部切除及臀肌筋膜松解术, 2 例骨化物多, 切除了患者有压痛和可触及的骨化物, 并且将局部增生、肥厚与皮肤及臀肌有粘连的臀肌筋膜切除, 并予以局部松解, 解除局部的粘连。

## 3 结果

4 例患者均获随访, 时间 2~64 个月, 平均 26 个月。患者疼痛均消失, 术区无压痛, 可触及疼痛的包块均消失, 术后 1 个月患者均恢复正常。



图1 患者,女,67岁,注射性臀部异位骨化症 1a. 术前X线显示髂骨翼后侧多发散在的斑片状及环形高密度钙化影,该影与骨质的密度相似,呈现外周密度高,中央密度低,似有髓腔 1b. 术前CT显示髂骨翼后外侧高密度影,位于皮下与肌层之间,高密度影内有类似髓腔的结构 1c. 术后病理结果显示(右臀部皮下)慢性炎症,瘤样钙盐沉着,伴钙化、骨化

**Fig.1** A 67-year-old woman with gluteal heterotopic ossification caused by injection 1a. Preoperative X-ray film showed multiple and scattered, plaque-like and annular high-density calcification in the back of iliac wing, whose density was similar to the bone. And it seemed to be the medullary cavity with high density in the outside and low density in the central 1b. Preoperative CT film showed high-density calcification like the medullary cavity between the back and exterior skin and muscles of iliac wing 1c. Postoperative pathology showed chronic inflammation under the skin of the right hip, and tumoral calcinosis with calcification and ossification

#### 4 讨论

异位骨化(heterotopic ossification, HO)是指正常情况下非钙化组织发生新骨形成、关节周围软组织中出现成熟板层状骨的现象。多半发生在大关节周围,例如髋关节,肘关节<sup>[1]</sup>。发病机制尚不清楚,常与各种创伤关系密切,如外伤性骨折、关节脱位、软组织损伤、感染、手术等,但由于注射引起的异位骨化少有报道。

髋关节异位骨化以发生于关节囊或大粗隆上方及外侧多见,其次为髂前下棘、髌臼上缘及坐骨结节附近,还可见于股骨外后方或大粗隆下方<sup>[2]</sup>。本组4例患者有下述共同特点:①均有苯甲醇青霉素的注射史;②异位骨化的位置大多位于臀部外上象限;③均为60多岁的老年女性,年轻时体弱多病,有过多次的注射史;④骨化部位都未累及髋关节;⑤骨化灶内有类似骨样结构—外周为骨质,中心为髓腔。

本组患者主要表现为疼痛和臀部可触及的包块,疼痛部位常不确定,有的位于腰臀交界处,有的位于臀部,也有位于大腿上端的股骨粗隆周围。笔者经过仔细检查及分析,认为疼痛原因部分是较大的骨化灶对局部皮肤的压迫,而更重要的原因是臀肌筋膜的挛缩和粘连,术中可触及局部筋膜很紧张且较为肥厚。对于有明显症状的骨化灶,手术切除是唯一根治的办法,手术切除的适应证包括:①神经血管受压;②关节活动范围受限;③严重疼痛<sup>[3]</sup>。本组患者手术中应注意探查臀肌筋膜和阔筋膜有无条索状

挛缩与粘连,予以全部切除是解除疼痛的关键。

本组均为老年人,其发生骨化的原因可能与21世纪60~80年代为了缓解疼痛,注射青霉素时用苯甲醇溶解有关。在儿童注射苯甲醇青霉素后发生臀肌挛缩,在成人则发生异位骨化。近年来很少发现类似病例,可能与注射药物纯度提高,溶剂改为生理盐水等有关,但仍有少数患者在肌注药物后臀部皮下有硬结,甚至感染、化脓现象。笔者认为反复多次出现的皮下注射结节,有可能就是转化为骨化症的基础,若出现后热敷、理疗,适度主动活动及口服NSAIDs类药物可避免异位骨化的产生。

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(收稿日期: 2012-05-20 本文编辑: 王玉蔓)