doi:10.11659/jjssx.10E019003

·临床报道·

乳腺癌前哨淋巴结活检术中不同染色淋巴结与肿瘤转移的关系

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[摘 要] **目的** 探讨乳腺癌前哨淋巴结活检术(SLNB)中不同染色情况的淋巴结与肿瘤转移的关系。**方法** 选择我院2014年1月至2018年1月行前哨淋巴结活检的乳腺癌患者92例,以亚甲蓝为示踪剂,根据92例乳腺癌患者SLNB中淋巴结染色情况的不同分为无染色组、完全染色组和染色不均组,病理检测3组患者淋巴结的肿瘤转移情况并作比较。**结果** 92例乳腺癌SLNB共取得淋巴结256枚,平均每例患者2.8枚,无染色组(80枚)肿瘤转移率为13.8%,完全染色组(112枚)肿瘤转移率为43.8%,染色不均组(64枚)肿瘤转移率为62.5%,3组间肿瘤转移率差异有统计学意义($P<0.05$)。**结论** 乳腺癌SLNB中染色不均的淋巴结最易出现肿瘤转移,其次为完全染色的淋巴结,染色淋巴结附近看到的未染色淋巴结也有肿瘤转移的可能,宜一并切除送检,有利于降低假阴性率。

[关键词] 乳腺癌;前哨淋巴结;染色;肿瘤转移;淋巴结活检术;示踪剂;亚甲蓝
[中图分类号] R737.9 [文献标识码] A [收稿日期] 2019-10-06

Relationship between lymph node staining and tumor metastasis in sentinel lymph node biopsy of breast cancer

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Abstract: Objective To investigate the relationship between lymph node staining and tumor metastasis in sentinel lymph node biopsy (SLNB) of breast cancer. **Methods** Totally 92 breast cancer patients with SLNB in our hospital from January 2014 to January 2018 were selected and divided into non staining group, complete staining group and inhomogeneous staining group according to the different staining state by methylene blue. The tumor metastasis of lymph nodes in three group were examined by pathological examination and compared. **Results** Totally 256 lymph nodes were obtained from sentinel lymph node biopsy of 92 breast cancer patients, with an average of 2.8 per case. The tumor metastasis rate of the non staining group(80 nodes) was 13.8%, the complete staining group(112 nodes) was 43.8%, and the inhomogeneous staining group(64 nodes) was 62.5%, the differencs were statistically significant($P<0.05$). **Conclusion** The tumor metastasis rate of lymph node with different staining state in sentinel lymph node biopsy of breast cancer is not the same. The inhomogeneous staining lymph node is most likely to have tumor metastasis, followed by complete staining lymph node. The non staining lymph node around the staining lymph node may also have tumor metastasis, so it should be excised and sent for pathological examination together, which can reduce the false negative rate.

Keywords: breast cancer; sentinel lymph node; staining; tumor metastasis; lymph node biopsy; tracer; methylene blue

乳腺癌是女性最常见的恶性肿瘤,手术是治疗该病的重要手段。目前前哨淋巴结活检术(sentinel lymph node biopsy,SLNB)广泛应用于乳腺癌的治疗,其可以使SLNB阴性的乳腺癌患者免于大范围的腋窝淋巴结清扫,从而减少了患侧上肢淋巴水肿、功能活动受影响等严重并发症[1-5]。亚甲蓝是临床上最为常用的前哨淋巴结活检的示踪剂,价格便宜,效果良好[6-7]。然而,由于跳跃转移因素,以亚甲蓝为示踪剂的SLNB有一定的假阴性率,说明在一些情况下某些未染色淋巴结也有肿瘤转移的可能性。我们在临床工作中发现SLNB中大部分前哨淋巴结呈完全蓝染状态,但也有一些淋巴结染色并不均匀,有时在蓝染的淋巴结附近可见到未染色的淋巴结,这些不同状态的淋巴结哪些更容易出现肿瘤转移,并未见相关文献明确报道。本研究旨在找出SLNB中不同染色情况的淋巴结与肿瘤转移的关系,并为降低SLNB的假阴性率提供参考依据。

1 资料与方法

1.1 临床资料

我院2014年1月至2018年1月行前哨淋巴结活检的乳腺癌患者共92例,均为女性,年龄28~79岁,平均(48.3±16.5)岁;病程1 d至6年,肿块大小0.5~3.0 cm。所有患者术前B超及临床体检均未发现患侧腋下肿大淋巴结。术后病理类型:浸润性导管癌84例,浸润性小叶癌8例。本研究获得医院伦理委员会审核批准,患者知情并同意。

1.2 方法

经肿块穿刺或局部切除活检病理确诊为乳腺癌，患者知情同意后由同一组医师手术。SLNB 具体操作方法：全身麻醉成功后，在患侧外上乳晕下注射 1% 亚甲蓝 2 mL，若肿块位于外上象限且已活检切除，则在瘤床周围加注 1% 亚甲蓝 2 mL，局部按摩 10 ~ 15 min。在腋下胸大肌外侧缘做 2 ~ 3 cm 的切口，电刀仔细往深部分离，沿蓝染的淋巴管找到染色的淋巴结。一般可见一个或几个蓝染的前哨淋巴结，有时可见淋巴结染色不均或部分蓝染，以及蓝染的淋巴结附近未染色的淋巴结，将这些淋巴结一并切除。仔细分离切下的淋巴结，按照染色情况不同分为未染色组、完全染色组、染色不均组，标记后送病理检测。若送检淋巴结有肿瘤转移，则常规行腋窝淋巴结清扫术。

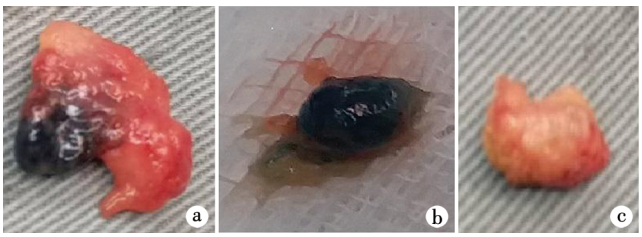
1.3 统计学分析

采用 STATA 12.0 统计软件进行数据处理。计数资料以率表示，组间比较采用 χ^2 检验，以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 前哨淋巴结活检术中淋巴结不同染色情况

前哨淋巴结活检术中染色不均淋巴结、完全染色淋巴结、染色淋巴结附近的未染色淋巴结见图 1。



a：染色不均；b：完全染色；c：未染色

图 1 SLNB 中不同染色情况的淋巴结

2.2 淋巴结不同染色组肿瘤转移情况

92 例乳腺癌前哨淋巴活检共取得淋巴结 256 枚，平均每例患者 2.8 枚，其中有肿瘤转移的淋巴结 100 枚，无肿瘤转移的淋巴结 156 枚，肿瘤转移率为 39.1%。92 例乳腺癌中，40 例前哨淋巴有肿瘤转移，52 例无肿瘤转移，肿瘤转移率为 43.5%。无染色组共 80 枚无染色淋巴结，肿瘤转移率为 13.8%；完全染色组共 112 枚完全染色淋巴结，肿瘤转移率为 43.8%；染色不均组共 64 枚染色不均或部分染色淋巴结，肿瘤转移率为 62.5%。3 组肿瘤转移率比较差异有统计学意义（$P<0.05$），见表 1。

表 1 SLNB 中淋巴结不同染色组肿瘤转移情况

组别	有肿瘤转移（个）	无肿瘤转移（个）	肿瘤转移率（%）
无染色组	11	69	13.8
完全染色组	49	63	43.8*
染色不均组	40	24	62.5#*

*：与无染色组比较，$P<0.05$；#：与完全染色组相比，$P<0.05$

3 讨论

乳腺癌是常见的恶性肿瘤，其发病率居女性恶性肿瘤的首位。腋窝淋巴结的处理是浸润性乳腺癌手术的标准环节，其目的是切除可能转移的淋巴结，明确肿瘤分期，评估预后以及制订后续的综合治疗方案[8-9]。常规的腋窝淋巴结清扫术因切除的范围较大，破坏了腋窝淋巴回流，术后常会出现患侧上肢淋巴水肿、感觉活动障碍等并发症[10-11]。近年来前哨淋巴结活检术越来越多地应用于乳腺癌腋窝淋巴结的处理上，其可以使前哨淋巴结活检阴性的乳腺癌患者免于手术大范围清扫腋窝，减少了术后并发症，并可取得与常规腋窝淋巴结清扫术相同的治疗效果[12-14]。

乳腺癌常通过淋巴引流系统发生肿瘤转移。前哨淋巴结是肿瘤淋巴引流途径上的第一站，是最容易出现肿瘤转移的淋巴结。若前哨淋巴结无肿瘤转移，则下一站淋巴结出现肿瘤转移的可能性很小，故这部分患者可以避免进一步的腋窝淋巴结清扫，从而减少相关的手术并发症[15]。乳腺癌前哨淋巴结活检术最关键的技术是准确定位找到前哨淋巴结，切除后进行病理检测。目前定位前哨淋巴结的方法主要有染料法、核素法和联合法等[16-18]。核素法和联合法因有放射性污染且需要较昂贵的探测仪器，故应用较少。染料法无需特殊设备、操作简便、费用低廉、效果良好，因此临床上常用亚甲蓝定位前哨淋巴结来进行前哨淋巴结活检术[19-20]。

我们在临床上常规使用亚甲蓝作示踪剂进行乳腺癌前哨淋巴结活检，术中发现淋巴结的染色情况并不相同，一些质地偏软偏小的淋巴结往往染色比较均匀；而另外一些质地偏硬偏大的淋巴结常常染色不均或部分染色，甚至一点都未染色；另有一些患者在染色淋巴结附近可见到未染色淋巴结。本研究把这些淋巴结一并切除，平均每例患者取到 2.8 枚，然后按照染色情况的不同分别送检，结果显示：染色不均的淋巴结肿瘤转移率达 62.5%，远高于完全染色淋巴结和未染色淋巴结。分析其原因为：①有肿瘤转移的淋巴结往往偏大偏硬，肿瘤细胞团破坏了淋巴结原来的结构，淋巴结某些部位因肿瘤细胞的堵塞使亚甲蓝不能够到达，故表

现为染色不均或只有部分染色,因此病理检测肿瘤的转移率较高;②有肿瘤转移的淋巴结中,肿瘤组织和淋巴组织的生物特性不同,对亚甲蓝的摄取率不同,表现为染色不均,故这部分淋巴结的肿瘤转移率较高;③某些长期炎性增生的淋巴结也可表现为偏大偏硬,增生组织与淋巴组织的生物特性不同,对亚甲蓝的摄取率不同,也可表现为染色不均,故染色不均的淋巴结肿瘤转移率只是偏高,并不会达到100%。

因肿瘤细胞有跳跃性转移,前哨淋巴结活检术存在一定的假阴性率[21]。一般认为,前哨淋巴结活检术中未染色的淋巴结不是前哨淋巴结,不需切除送检[22]。但本研究显示这部分存在于染色淋巴结附近的未染色淋巴结肿瘤转移率虽然不高,但也达到了13.8%,因此这部分淋巴结宜一并切除送检,这样有利于降低前哨淋巴结活检的假阴性率,这一点与国内韩超等[23]的观点一致。分析其原因为:①肿瘤的淋巴跳跃性转移可以表现为染色的前哨淋巴结未见肿瘤转移,而附近下一站未染色的淋巴结已有肿瘤转移,这种情况下切下的染色前哨淋巴结虽无肿瘤转移,但附近的未染色淋巴结却有肿瘤转移,术中将这部分未染色淋巴结一并切除送检可以降低前哨淋巴结活检的假阴性率;②转移的肿瘤组织完全堵塞了淋巴结的淋巴门,使淋巴引流受阻,亚甲蓝不能进入这类淋巴结,表现为淋巴结未染色,但这时已有肿瘤转移,故需一并切除送检;③染色的前哨淋巴结和附近的下一站淋巴结均有肿瘤转移,但染色前哨淋巴结中的肿瘤成分堵塞了引流通道,使亚甲蓝不能够顺利到达下一站淋巴结,这时切下的染色淋巴结附近的下一站未染色淋巴结也表现为肿瘤转移。

综上所述,以亚甲蓝为示踪剂寻找乳腺癌前哨淋巴结方法简单,效果良好,但要注意不同染色情况的淋巴结肿瘤转移率并不相同:染色不均的淋巴结最易出现肿瘤转移;其次为完全染色的淋巴结;而染色淋巴结附近看到的未染色淋巴结虽然肿瘤转移率不高但也有肿瘤转移的可能,宜一并切除送检,这样有利于降低前哨淋巴结活检的假阴性率。

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doi:10.11659/jjssx.07E019018

·临床报道·

经阴道彩色多普勒超声诊断子宫肌瘤、腺肌症及腺肌瘤的临床价值

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[摘 要] **目的** 探讨经阴道彩色多普勒超声诊断子宫肌瘤、腺肌症与腺肌瘤的准确率。**方法** 选取陆军军医大学第一附属医院2017年5月至2019年3月经手术病理诊断为子宫肌瘤(53例)、腺肌症(46例)及腺肌瘤(21例)的120例妇科疾病患者,同时采用经腹部和经阴道彩色多普勒超声检查,比较两种检测方式的准确率。**结果** 经阴道彩色多普勒超声检查子宫肌瘤、子宫腺肌症、子宫腺肌瘤的准确率分别为96.23%、93.48%、85.71%,经腹部彩色多普勒超声检查子宫肌瘤、子宫腺肌症、子宫腺肌瘤的准确率分别为83.02%、78.26%、57.14%,2组比较差异具有统计学意义($P<0.05$)。经阴道彩色多普勒超声检查能够有效分辨出子宫肌瘤、腺肌症与腺肌瘤病灶内部与周边的血流状况。**结论** 与腹部彩色多普勒超声检查比较,经阴道超声检查可以清楚地看到子宫的组织结构,检测病灶内部和周边的血流动力学特点,对子宫肌瘤、腺肌症以及腺肌瘤的诊断准确率更高。

[关键词] 经阴道彩色多普勒超声;腹部彩色多普勒超声;子宫肌瘤;子宫腺肌症;腺肌瘤;准确率
[中图分类号] R737.33 [文献标识码] A [收稿日期] 2019-07-16

Clinical value of transvaginal color Doppler ultrasonography in diagnosis of uterine fibroids, adenomyosis and adenomyoma

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Abstract: Objective To investigate the accuracy of transvaginal color Doppler ultrasonography in diagnosis of uterine fibroids, adenomyosis and adenomyoma. **Methods** A total of 120 patients who were diagnosed as uterine fibroids (53 cases), adenomyosis (46 cases) and adenomyoma (21 cases) by surgical pathology findings in first hospital affiliated to army medical university from May 2017 to March 2019 were enrolled in this study. Abdominal and transvaginal color Doppler ultrasonography were carried out to compare the accuracy. **Results** The accuracies of transvaginal color Doppler ultrasonography in uterine fibroids, uterine adenomyosis and uterine adenomyoma were 96.23%, 93.48% and 85.71%, respectively. The accuracies of abdominal color Doppler ultrasonography in uterine fibroids, uterine adenomyosis and uterine adenomyoma were 83.02%, 78.26% and 57.14%, respectively. There were significant differences between the two methods ($P<0.05$). Moreover, transvaginal color Doppler ultrasound examination could effectively detect the blood flows in and around the lesions of uterine fibroids, adenomyosis and adenomyoma. **Conclusion** Compared with abdominal method, transvaginal color Doppler ultrasonography can clearly see the structure of the uterus and detect the blood flows in and around the lesions, which is more accuracy in diagnosis of uterine fibroids, adenomyosis and adenomyoma.

Keywords: transvaginal color Doppler ultrasound; abdominal color Doppler ultrasonography; uterine fibroids; adenomyosis; adenomyoma; accuracy

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(编辑:左艳芳)