

# 窄带谱成像放大胃镜在早期食管鳞癌及癌前病变中的诊断价值

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**摘要** 回顾性分析 97 例在白光内镜下疑诊为早期食管鳞癌或癌前病变的患者,进行窄带谱成像放大内镜(NBI-ME)检查,行靶向活检,最终经内镜下切除或者手术切除确定病灶性质。分析病变的 NBI-ME 的形态特点,并与活检病理、内镜切除或手术切除标本病理进行对照。在 97 例患者中最终确诊为鳞癌 35 例,高级别上皮内瘤变 62 例。NBI-ME 诊断为鳞癌或高级别上皮内瘤变的有 95 例,诊断准确性达 97.9%。经过靶向活检,有 10 例原诊断为低级别上皮内瘤变或炎症的患者被诊断为鳞癌或高级别上皮内瘤变,准确性提高 52.6%。而根据乳头内毛细血管网的形态,对肿瘤浸润深度判断的准确性达到 81.4%。

**关键词** 窄带谱成像放大胃镜;早期食管癌;癌前病变

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食管癌是常见的上消化道肿瘤,其早诊早治是目前临床诊治的重点。虽然一些血清肿瘤标志物对食管癌的发现有幫助,但目前临床上还是以仔细的内镜检查作为发现早期食管鳞癌和癌前病变的一线

选择<sup>[1]</sup>。在内镜诊断过程中,病变性质的判断和病变浸润深度的判断对于患者治疗方案的选择极为重要。近年来窄带谱成像放大内镜(narrow band imaging magnifying endoscopy, NBI-ME)在早期食管鳞癌及癌前病变中的诊断价值越来越受到重视。安徽医科大学第一附属医院近年来采用 NBI-ME 技术对早期食管鳞癌患者在手术切除或内镜切除术前进行了仔细的观察分析,该研究对此进行了回顾性分析,以明确 NBI-ME 对早期食管癌和癌前病变性质判断和浸润深度判断的诊断价值。

## 1 材料与方法

**1.1 病例来源** 收集 2013 年 6 月~2014 年 12 月就诊于安徽医科大学第一附属医院的 97 例患者,所有患者在白光内镜下发现食管黏膜病变,疑诊为早期食管癌或癌前病变,进行 NBI-ME 检查,行靶向活检,并最终经内镜下切除或者手术切除确定病灶性质。

**1.2 操作过程** 应用 NBI 主机及光源(Olympus CV-260SL)、放大内镜(Olympus GIF-H260Z),均由同一位内镜医师对患者进行检查。进镜后先行常规白光检查食管黏膜,然后在 NBI 模式下再观察食管黏膜。根据 NBI 内镜成像原理正常食管黏膜无明显褐色区域者为阴性,而病变区域呈褐色者为阳性。发现阳性病变后,启动变焦放大功能对病变区上皮

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## The study of correlative affecting factors on re-establishing stereopsis of surgically aligned adult concomitant strabismus

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**Abstract** To analyze the effect of pre-surgical status on the post-surgical stereopsis in surgically aligned adult concomitant strabismus. By using Titmus and Randot stereo tests, we measured near stereo acuity of 99 adults who had constant exotropia and were successfully aligned by surgery. A covariance analysis showed that the post-surgical stereo acuity was significantly determined by the type of strabismus (i. e., whether that's intermittent or not;  $P = 0.001$ ), the duration of pre-surgical exotropia ( $P = 0.002$ ) and the year on-set ( $P = 0.048$ ) but not by the pre-surgical deviation ( $P = 0.133$ ). We conclude that the stereopsis of adult concomitant strabismus can be reestablished by surgery, while the extent of such an improvement is determined by the type of strabismus, the duration of pre-surgical exotropia and the year on-set of patients.

**Key words** concomitant exotropia; near stereoscopic visual function; reconstruction

乳头内毛细血管袢(intraepithelial papillary capillary loop, IPCL)形态进行放大观察,对其形态分型。对所有 NBI 阳性区域取活检送病理检查。

IPCL 分型参考日本食管学会推荐的分型方法<sup>[2]</sup>。A 型:血管形态无变化或轻微变化;B1 型:袢状的异常血管;B2:没有袢形成的异常血管;B3 型:高度扩张的不规则血管。A 型提示正常或炎症改变,B1 型提示病灶浸润至黏膜上皮层(m1)或固有层(m2),B2 型提示病灶浸润至黏膜肌层(m3)或黏膜下层浅层(sm1),B3 型提示病灶浸润至黏膜下层深层(sm2 以上)。随着 IPCL 排序向后,提示肿瘤浸润程度加深,故当一处病变存在 2 种或 2 种以上 IPCL 类型时,统计时采用后一种 IPCL 分型。

**1.3 结果分析** 所有患者在内镜下切除病灶或手术切除病灶后,进行病理检查。分析病变的 NBI-ME 的形态特点,并与活检病理、内镜切除或手术切除标本病理进行对照分析,评价 NBI-ME 在早期食管鳞癌和癌前病变诊治中的作用。

## 2 结果

**2.1 入组情况** 入组病例总体情况:本研究共纳入 97 例患者,最终经内镜下切除或手术切除后病理确诊为鳞癌 35 例,高级别上皮内瘤变 62 例。其中男 74 例、女 23 例,年龄 42~78(62.6±8.1)岁。

### 2.2 诊断结果

**2.2.1 NBI-ME 诊断的准确性** 在 97 例患者中,符合 NBI-ME 改变,即存在棕褐色区域,有异常 IPCL 改变,诊断为癌或高级别上皮内瘤变的患者共有 95 例,2 例患者 IPCL 误判为 A 型,诊断为炎症及低级别上皮内瘤变,NBI-ME 对性质判断的准确性达到 97.9%。

**2.2.2 白光内镜病理、NBI 病理与内镜切除术后病理结果比较** 97 例患者白光内镜活检病理诊断结果为早期食管癌 22 例、高级别上皮内瘤变 56 例、低级别上皮内瘤变 18 例、炎症 1 例。经 NBI 放大内镜下靶向活检后,病理诊断结果为早期胃癌 22 例、高级别上皮内瘤变 65 例、低级别上皮内瘤变 10 例。白光内镜活检诊断为低级别上皮内瘤变的 18 例患者和诊断为炎症的 1 例患者中,经靶向活检,有 10 例诊断为癌或高级别上皮内瘤变,诊断准确率提高了 52.6%(10/19)。

**2.2.3 浸润深度诊断结果** 根据 IPCL 的形态和浸润深度之间的对应关系,在 97 例患者中,浸润深度判断正确的有 79 例,准确率达 81.4%。其中深度达浸

润 m1 或 m2 的 78 例患者中 62 例判断正确,准确性达 79.5%;深度达浸润 m3 或 sm1 的 13 例患者中 12 例判断正确,准确性达 92.3%;深度达浸润 sm2 或更深的 6 例患者中 5 例判断正确,准确性达 83.3%。

## 3 讨论

早期食管癌是指肿瘤局限于黏膜和黏膜下层,其治疗的效果和预后取决于有无淋巴结的转移<sup>[3]</sup>。有研究<sup>[4]</sup>显示,对于早期食管鳞癌患者而言,当病灶局限于黏膜层时,尤其未累及黏膜肌层时,其淋巴结转移的风险极低,为 0%~3%;当病灶累及黏膜下层时,其淋巴结转移的风险升至 26%~50%。对于病灶局限于黏膜层,淋巴结转移风险很低的患者,目前临床可以采用内镜下切除;而如果病灶浸润至黏膜下层或更深,淋巴结转移的风险很高的患者,则需要采用外科手术切除或放化疗的治疗方式<sup>[5]</sup>。所以准确判断病灶的性质和浸润深度对于早期食管癌患者的诊断和选择正确的治疗方式至关重要。

对于食管癌和癌前病变性质的判断,既往临床上多采用卢戈氏碘液喷洒来判断。有研究<sup>[6]</sup>显示碘染对高级别上皮内瘤变和食管癌的诊断的敏感性可以达到 94.2%,但特异性仅 64%。而近年来达到广泛应用的 NBI 技术将内镜光源过滤、窄化,能更好地显示黏膜表面的微血管和微结构。食管癌区域毛细血管丰富,在普通白光内镜下呈红色,在 NBI 模式下则呈棕褐色,与周围正常黏膜形成明显的对比,结合观察 IPCL 的改变,能很好地提高早期食管癌的发现率。国外有研究<sup>[7]</sup>显示,不采用放大的 NBI 观察发现率可达 97%,其诊断特异性可以达到 90%以上,诊断的准确性达到 95.1%<sup>[8]</sup>。本研究显示 NBI-ME 检查符合率达 97.9%,与国外的研究<sup>[8]</sup>结果类似。当然,这也可能与本研究选择的患者基本为白光胃镜疑诊早期食管癌或高级别上皮内瘤变有关。

本研究还显示,有 10 例白光活检为诊断低级别上皮内瘤变的患者经过 NBI-ME 检查靶向活检后诊断为癌或者高级别上皮内瘤变。这与宋洁莹等<sup>[9]</sup>在早期胃癌靶向活检方面的研究类似。所以对于白光内镜疑诊为早期食管癌或高级别上皮内瘤变的患者,即使活检诊断为低级别上皮内瘤变或炎症,仍不应轻易否定诊断,而应该进一步检查,如在 NBI-ME 指导下靶向活检,以提高活检的准确性。

对于食管癌浸润深度的诊断,既往临床多采用超声内镜的方法来判断。然而,其诊断的准确性争议颇多。一项荟萃研究<sup>[10]</sup>显示,超声内镜对 T1a 期

食管癌诊断的敏感性和特异性可以达到 85% 和 87% ,对 T1b 期食管癌的敏感性和特异性均可以达到 86% 。但另一些研究<sup>[11]</sup> 则认为超声内镜对于早期食管癌的诊断准确性欠佳 ,T1a 期仅 39% ,T1b 期仅 51% 。本研究显示 ,仔细观察病灶的 IPCL ,对病灶深度判断的准确性可以达到 81.4% ,与国内外文献<sup>[12-13]</sup> 报道的准确性类似。国外有文献<sup>[14]</sup> 报道 ,结合超声内镜和 NBI-ME 则可以进一步提高对病变深度的判断。

总之 ,NBI-ME 对于判断早期食管癌及癌前病变性质和浸润深度具有较高的诊断价值 ,可以极大地帮助医师准确评估病情 ,做出合理的治疗选择。

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## The value of NBI-ME in diagnosis of early stage of esophageal squamous cancers or precancerous lesions

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**Abstract** 97 patients who were suspected of early stage of esophageal squamous cancer or precancerous lesions were enrolled. The lesions were rechecked using narrow band imaging magnifying endoscopy (NBI-ME), then target biopsy were conducted. All patients received endoscopic resection or surgery. The features of all the lesions under NBI-ME and the pathological results of biopsy, endoscopic resection or surgical specimen were compared. The patients were diagnosed with 35 cases of squamous cancer and 62 cases of high grade intraepithelial neoplasia (HGIN) according to the pathological results of endoscopic resection or surgical specimen. We diagnosed 95 cases of cancer or HGIN according to the NBI-ME feature, the diagnostic accuracy was 97.9%. 10 cases with former diagnosis of low grade intraepithelial neoplasia (LGIN) or inflammation were changed to cancer or HGIN according to target biopsy. The progressive rate of target biopsy was 52.6%. While the diagnostic accuracy of invasive depth of the lesions was 81.4% according to the features of intraepithelial papillary capillary loop (IPCL).

**Key words** narrow band imaging magnifying endoscopy; early stage of esophageal squamous cancer; precancerous lesions