·经验交流·

超声引导下细针穿刺细胞学联合BRAF^{V600E}基因检测在甲状腺乳头状癌诊断中的应用价值

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摘 要 **目的** 探讨超声引导下细针穿刺细胞学(FNAC)联合丝/苏氨酸特异性激酶突变基因V600E(BRAF^{V600E})检测诊断甲状腺乳头状癌的应用价值。**方法** 选取我院经手术病理证实的甲状腺乳头状癌患者207例,比较FNAC与BRAF^{V600E}单独及联合诊断对其的效能。**结果** FNAC诊断甲状腺乳头状癌的敏感性为70.7%,准确率为74.4%;BRAF^{V600E}的敏感性为64.6%,准确率为69.1%。两种方法联合后敏感性为86.2%(156/181),准确率为87.9%(182/207),均较单一检测方法显著提高,差异均有统计学意义(均P<0.001)。**结论** 超声引导下FNAC联合BRAF^{V600E}检测可提高甲状腺乳头状癌的诊断准确率。

关键词 超声引导;穿刺,细针细胞学;BRAF基因;甲状腺乳头状癌

[中图法分类号]R445.1;R736.1 [文献标识码] A

Value of fine-needle aspiration cytology combined with BRAF^{V600E} mutation testing in diagnosis of papillary thyroid cancer

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ABSTRACT **Objective** To explore the application value of fine-needle aspiration cytology (FNAC) combined with BRAF^{V600E} mutation testing in diagnosis of thyroid papillary cancer (PTC). **Methods** Two hundred and seven cases of PTC confirmed by operation and pathology were selected. It was compared with the efficacy of FNAC, BRAF^{V600E} alone or in combination. **Results** Taking pathological results as golden standard, the sensitivity was 70.7% and the accuracy was 74.4% for FNAC in diagnosis of thyroid papillary cancer. The sensitivity of BRAF^{V600E} mutation detection was 64.6%, and the accuracy was 69.1%. The sensitivity (86.2%) and the accuracy (87.9%) for FNAC combined with BRAF^{V600E} mutation testing were significantly higher than single detection method (boht P<0.001). **Conclusion** FNAC combined with BRAF^{V600E} mutation testing could significantly improve the accuracy of diagnosis of PTC.

KEY WORDS Ultrasonic guidance; Aspiration, fine-needle cytology; BRAF^{V600E}; Thyroid papillary cancer

近年来,我国甲状腺癌的发病率呈增高趋势,约为5%~15%[1],多发于女性,其中甲状腺乳头状癌(thyroid papillary cancer, PTC)占60%~80%[1-2]。超声引导下甲状腺细针穿刺细胞学(fine-needle aspiration cytology, FNAC)检查有助于减少不必要的甲状腺结节手术,并可帮助制定最佳手术方案,其阳性预测值虽高(52%~98%)[2],但仍有少部分患者难以确诊。联合丝/苏氨酸特异性激酶基因突变基因V600E(BRAF^{V600E})基因突变与甲状腺癌的发生、进展密切相关[2-4],有文献[4]报道其特异性高达100%(95%可信区间0.98~1.00)。本研究旨在探讨超声引导下FNAC联合BRAF^{V600E}突变检测在诊断PTC中的临床价值。

资料与方法

一、临床资料

选取2016年1月至2017年8月在我院接受甲状腺切除手术的患者207例,其中男61例,女146例,年龄22~76岁,平均(38.2±15.7)岁;术前均行超声引导下FNAC和BRAF ^{V600E}检测。每例患者均选择甲状腺的1个结节;如为多发,选取最可疑或者有恶性特征的最大结节进行FNAC;共纳入207个结节。其中PTC 181个,良性结节26个。

二、仪器与方法

1.超声引导下FNAC:使用百胜MyLab 90彩色多普勒超声诊断仪,L5-12探头,频率5~12 MHz。患者取仰卧位,颈部垫高,头向后仰,充分暴露甲状腺。常规超声观测结节位置、形态大小、边界、内部回声、纵横比及钙化等,待定位拟穿刺结节后,常规消毒,用少量1%~2%的利多卡因进行局部皮下浸润麻醉。超声引导下穿刺针进入目标后,反复提插加旋转6~10次,快速拔针。然后将针内容物推至玻片上涂片,快速固定,肉眼及镜下观察,判断标本是否足够,固定后送病理科进行检查。依照甲

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