

# 吉非替尼联合阿帕替尼一线治疗EGFR敏感突变的晚期非小细胞肺癌患者的疗效及安全性

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年16期 页码: 2867-2871 栏目: 论著(胸部肿瘤) 出版日期: 2019-07-08

**Title:** Efficacy and safety of gefitinib combined with apatinib in the first-line treatment of patients with advanced non-small cell lung cancer with EGFR-sensitive mutations

**作者:** 邬德东<sup>1</sup>; 张倩<sup>1</sup>; 王启明<sup>2</sup>; 刘丽英<sup>1</sup>

1.郑州市第一人民医院肿瘤内科, 河南 郑州 450004;2.河南省肿瘤医院呼吸内科, 河南 郑州 450008

**Author(s):** Wu Dedong<sup>1</sup>; Zhang Qian<sup>1</sup>; Wang Qiming<sup>2</sup>; Liu Liying<sup>1</sup>

1.Department of Medical Oncology,The First People's Hospital of Zhengzhou,Henan Zhengzhou 450004,China;2.Department of Respiratory,Henan Cancer Hospital,Henan Zhengzhou 450008,China.

**关键词:** 吉非替尼; 阿帕替尼; EGFR突变; 非小细胞肺癌

**Keywords:** gefitinib; apatinib; epidermal growth factor receptor mutation; non-small cell lung cancer

**分类号:** R734.2

**DOI:** 10.3969/j.issn.1672-4992.2019.16.016

**文献标识码:** A

**摘要:** 目的: 探讨吉非替尼联合阿帕替尼对比吉非替尼一线治疗EGFR敏感突变的晚期非小细胞肺癌患者的疗效及安全性, 以明确阿帕替尼能否延迟吉非替尼的耐药时间。方法: 选取2015年1月至2016年12月期间我院收治的EGFR敏感突变的晚期NSCLC患者50例进行回顾性分析, 分为观察组和对照组, 每组各25人。观察组: 吉非替尼(0.25 g, 口服, 1次/日)联合阿帕替尼(0.5 g, 口服, 1次/日); 对照组: 吉非替尼(0.25 g, 口服, 1次/日)。评价无进展生存时间、客观缓解率、疾病控制率和不良反应发生率。结果: 观察组、对照组客观缓解率分别为76.0%、68.0%, 疾病控制率分别为96%、92%。观察组的近期疗效似有优于对照组的趋势, 但差异均无统计学意义。观察组中位PFS为14.3个月(95%CI 11.3-17.2), 对照组中位PFS为10.3个月(95%CI 8.5-12.0), 差异有统计学意义。观察组1年的PFS率为64%, 95%CI为44.4%-83.6%; 对照组为20%, 95%CI为4.3%-35.6%。两组主要不良反应为皮疹、高血压、蛋白尿、消化道反应、手足综合征、肝酶升高、间质性肺炎以及乏力, 最为突出的不良反应为皮疹, 观察组发生率为88%, 对照组为84%( $P > 0.05$ )。两组主要不良反应有统计学差异的为1-4度的高血压( $P=0.004$ )、蛋白尿( $P=0.027$ )、手足综合征( $P=0.040$ ), 但严重不良反应(3-4度)均无统计学差异。结论: 吉非替尼联合阿帕替尼一线治疗EGFR基因敏感突变的晚期NSCLC患者似乎是一种有效且耐受良好的治疗策略, 可能延迟吉非替尼的耐药时间, 还需大规模多中心的临床随机对照试验证实。

**Abstract:** Objective: To evaluate the efficacy and safety of gefitinib when combined with apatinib as first-line therapy in patients with advanced non-small cell lung cancer with EGFR-sensitive mutations, and to assess whether this strategy might prolonged the resistance time of gefitinib. Methods: This was a retrospective analysis of 50 cases of advanced NSCLC admitted to the medical group of Zhengzhou First People's Hospital from January 2015 to December 2016. Patients were assigned to observation group or control group. Patients who received gefitinib (0.25 g per day) combined with apatinib (0.5 g per day) was considered as observation group, and patients who were administered at gefitinib 0.25 g per day was considered as control group. To estimate the progression-free survival time (PFS), objective response rate (ORR), disease control rate (DCR), and incidence of adverse effect. Results: The objective response rate (ORR) in the observation group and the control group was 76.0% and 68.0% respectively, and the disease control rate (DCR) was 96% and 92.0% respectively. The short-term efficacy of the observation group seemed to be better than that of the control group, but the difference was not statistically significant. The median PFS was 14.3 months (95%CI 11.3-17.2) in the observation group and 10.3 months (95%CI 8.5-12.0) in the control group. The difference was statistically significant. The 1-year PFS rate of the experimental group and the control group was 64% (95%CI 44.4%-83.6%), 20% (95%CI 4.3%-35.6%) respectively. The main adverse reactions in the two groups were rash, hypertension, proteinuria, nausea and vomiting, hand-foot syndrome, aspartate transaminase/alanine aminotransferase increase, pulmonary interstitial

fibrosis, and fatigue. The most prominent adverse reaction was rash, 88% in the observation group and 84% in the control group ( $P > 0.05$ ). Other common adverse event was hypertension ( $P=0.004$ ), proteinuria ( $P=0.027$ ), and hand-foot syndrome ( $P=0.040$ ) of any grade, but serious adverse reactions of grade 3-4 were not significant. Conclusion: Gefitinib combined with apatinib as a first-line treatment of advanced NSCLC patients with EGFR gene-sensitive mutations appears to be an effective and well-tolerated treatment strategy, and may extend the resistance time of gefitinib. Large-scale, multicenter randomized controlled clinical trials are needed to confirm this conclusion.

## 参考文献/REFERENCES

- [1] LAN L, ZHAO F, CAI Y, et al. Epidemiological analysis on mortality of cancer in China, 2015 [J]. *Chin J Epidemiol*, 2018, 39(1):32-34. [兰蓝, 赵飞, 蔡玥, 等. 中国居民2015年恶性肿瘤死亡率流行病学特征分析 [J]. *中华流行病学杂志*, 2018, 39(1):32-34.]
- [2] Chen W, Zheng R, Baade PD, et al. SEER cancer statistics in China, 2015 [J]. *CA: A Cancer Journal for Clinicians*, 2016, 66(2):115-132.
- [3] Tony S, Mok, Yilong Wu, et al. SEER Gefitinib or carboplatin-paclitaxel in pulmonary adenocarcinoma [J]. *N Engl J Med*, 2009, 361(10):947-957.
- [4] Zhou C, Wu YL, Chen G, et al. Erlotinib versus chemotherapy as first-line treatment for patients with advanced EGFR mutation-positive non-small-cell lung cancer (OPTIMAL, CTONG-0802): a multicenter, open-label, randomized, phase 3 study [J]. *Lancet Oncol*, 2011, 12(8):735-742.
- [5] Maemondo M, Inoue A, Kobayashi K, et al. Gefitinib or chemotherapy for non-small-cell lung cancer with mutated EGFR [J]. *N Engl J Med*, 2010, 362(25):2380-2388.
- [6] Mitsudomi T, Morita S, Yatabe Y, et al. Gefitinib versus cisplatin plus docetaxel in patients with non-small cell lung cancer harbouring mutations of the epidermal growth factor receptor (WJTOG3405): An open label, randomized phase 3 trial [J]. *Lancet Oncol*, 2010, 11(2):121-128.
- [7] Fukuoka M, Wu YL, Thongprasert S, et al. Biomarker analyses and final overall survival results from a phase III, randomized, open-label, first-line study of gefitinib versus carboplatin/paclitaxel in clinically selected patients with advanced non-small-cell lung cancer in Asia (IPASS) [J]. *J Clin Oncol*, 2011, 29(21):2866-2874.
- [8] FENG JH, QIN SK, WANG L. Clinical and experimental progression of mesylate apatinib [J]. *Chin Clin Oncol*, 2017, 22(4):345-356. [冯久桓, 秦叔逵, 王琳. 甲磺酸阿帕替尼的研究现状与进展 [J]. *临床肿瘤学杂志*, 2017, 22(4):345-356.]
- [9] Ichihara E, Hotta K, Nogami N, et al. Phase II trial of gefitinib in combination with bevacizumab as first-line therapy for advanced non-small cell lung cancer with activating EGFR gene mutations: the Okayama Lung Cancer Study Group Trial 1001 [J]. *J Thorac Oncol*, 2015, 10(3):486-491.
- [10] Zheng R, Zeng HJ, Zhang S, et al. National estimates of cancer prevalence in China, 2011 [J]. *Cancer Lett*, 2016, 370(1):33-38.
- [11] Huang M, Huang B, Li G. Apatinib affect VEGF-mediated cell proliferation, migration, invasion via blocking VEGFR2/RAF/MEK/ERK and PI3K/AKT pathways in cholangiocarcinoma cell [J]. *BMC Gastroenterol*, 2018, 18(1):169.
- [12] Zhu JY, Li XT, Xie CF, et al. Apatinib, a new small molecular VEGFR2 inhibitor suppresses the activity of lung cancer stem cells [J]. *J Thorac Oncol*, 2017, 12(1):S1279.
- [13] Lin C, Wang S, Xie W, et al. Apatinib inhibits cellular invasion and migration by fusion kinase KIF5B-RET via suppressing RET/Src signaling pathway [J]. *Oncotarget*, 2016, 7(37):59236-59244.
- [14] WANG Pengshan, SUN Yunxiang, LIU Ling. Observation on the short-term clinical effect and adverse reactions of Apatinib in the treatment of advanced non-small cell lung cancer [J]. *Modern Oncology*, 2018, 26(09):1365-1367. [王鹏善, 孙运祥, 刘玲. 阿帕替尼治疗晚期非小细胞肺癌的近期疗效及不良反应 [J]. *现代肿瘤医学*, 2018, 26(09):1365-1367.]
- [15] Seto T, Kato T, Nishio M, et al. Erlotinib alone or with bevacizumab as first-line therapy in patients with advanced non-squamous non-small-cell lung cancer harbouring EGFR mutations (JO25567): an open-label, randomized, multicenter, phase 2 study [J]. *Lancet Oncol*, 2014, 15(11):1236-1244.
- [16] Yang JJ, Zhou Q, Yan HH, et al. A phase III randomized controlled trial of erlotinib vs gefitinib in advanced non-small cell lung cancer with EGFR mutations [J]. *Br J Cancer*, 2017, 116(5):568-574.
- [17] Li J, Qin S, Xu J, et al. Apatinib for chemotherapy-refractory advanced metastatic gastric cancer: Results from a randomized, placebo-controlled, parallel-arm, phase II trial [J]. *J Clin Oncol*, 2013, 31(26):3219-3225.
- [18] Li J, Qin S, Xu J. Randomized, double-blind, placebo-controlled phase III trial of apatinib in patients with chemotherapy-refractory advanced or metastatic adenocarcinoma of the stomach or gastroesophageal junction [J]. *J Clin Oncol*, 2016, 34(13):148-1454.
- [19] Lankhorst S, Kappers MH, Van Esch JH, et al. Hypertension during vascular endothelial growth factor inhibition: Focus on nitric oxide, endothelin-1, and oxidative stress [J]. *Antioxid Redox Signal*, 2014, 20(1):135-145.
- [20] Feliu J, Salud A, Safont MJ, et al. Correlation of hypertension and proteinuria with outcome in elderly bevacizumab-treated patients with metastatic colorectal cancer [J]. *PLoS One*, 2015, 10(1):e0116527.
- [21] Qin SK, Li J. Guideline of Apatinib in the treatment of gastric cancer [J]. *Chin Clin Oncol*, 2015, 20(9):841-847.

---

**备注/Memo:** 河南省医学科技攻关计划省部共建项目 (编号:201601026)

---

更新日期/Last Update: 1900-01-01