老年急性非早幼粒细胞白血病NPM1及FLT3-ITD基因突变特征及临床意义

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Title: Characteristics and clinical significance of NPM1 and FLT3-ITD gene mutations in elderly patients with non-acute promyelocytic leukemia

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摘要: 目的：探讨老年急性非早幼粒细胞白血病（non-acute promyelocytic leukemia,non-APL）NPM1及FLT3-ITD基因突变特征及临床意义。方法：回顾性分析本院2011年1月至2018年6月接受NPM1、FLT3-ITD基因突变检测的98例老年non-APL患者临床资料，统计NPM1、FLT3-ITD基因突变阳性率，分析不同核型non-APL患者NPM1、FLT3-ITD基因突变情况，并比较 NPM1/FLT3-ITD基因突变阳性与阴性患者性别、年龄、白细胞、血小板、血红蛋白、骨髓原始细胞、CD34+、CD117+的关系。结果：NPM1基因突变阳性20例，占20.41%；FLT3-ITD基因突变阳性15例，占15.31%；NPM1、FLT3-ITD基因突变双阳性5例，占5.10%。正常核型38例，占38.78%，正常核型患者NPM1、FLT3-ITD基因突变阳性率及双阳性率均显著高于异常核型者（P<0.05）。NPM1基因突变阳性患者白细胞计数、血小板计数均显著大于NPM1基因突变阴性者，CD34+比例显著小于NPM1基因突变阴性者（P<0.05）；FLT3-ITD基因突变阳性患者白细胞、骨髓原始细胞均显著大于FLT3-ITD基因突变阴性者（P<0.05）。NPM1基因突变阳性患者1疗程CR率、总CR率均显著高于NPM1基因突变阴性者（P<0.05）；FLT3-ITD基因突变阳性患者1疗程CR率、总CR率均显著低于FLT3-ITD基因突变阴性者（P<0.05）。结论：对老年non-APL患者行FLT3-ITD及NPM1基因突变检测，可指导临床治疗及疗效评估。

Abstract: Objective：To investigate the characteristics and clinical significance of NPM1 and FLT3-ITD gene mutations in elderly patients with non-acute promyelocytic leukemia (non-APL).Methods：The clinical data of 98 elderly patients with non-APL who were tested for FLT3-ITD and NPM1 mutations in the hospital during the period from January 2011 to June 2018 were retrospectively analyzed.The positive rates of NPM1 and FLT3-ITD mutations were statistically analyzed，and FLT3-ITD and NPM1 mutations in patients with different karyotypes were analyzed.The gender，age，white blood cell，platelet，hemoglobin，bone marrow blasts，CD34+，CD117+ and curative effect were compared between NPM1/FLT3-ITD gene mutation positive and negative patients.Results：NPM1 gene mutation was positive in 20 cases，accounting for 20.41% while FLT3-ITD gene mutation was positive in 15 cases，accounting for 15.31%.NPM1 and FLT3-ITD gene mutations were positive in 5 cases，accounting for 5.10%.There were 38 cases with normal karyotype，accounting for 38.78%.The positive rates of NPM1 and FLT3-ITD gene mutations and double positive rate in patients with normal karyotype were significantly higher than those in patients with abnormal karyotype (P<0.05).The white blood cell and platelet counts in NPM1 gene mutation positive patients were significantly greater and the ratio of CD34+ was significantly lower than that in NPM1 gene mutation negative patients (P<0.05).White blood cells and bone marrow blasts in FLT3-ITD gene mutation positive patients were significantly more than those in FLT3-ITD gene mutation negative patients (P<0.05).The CR after 1 course of treatment and total CR of NPM1 gene mutation

positive patients were significantly higher than those of NPM1 gene mutation negative patients (P<0.05).The CR after 1 course of treatment and total CR of FLT3-ITD gene mutation positive patients were significantly lower than those of FLT3-ITD gene mutation negative patients (P<0.05).Conclusion: The detection of FLT3-ITD and NPM1 gene mutations in elderly patients with non-APL can guide clinical treatment and evaluation of curative effect.

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