

论文

骨髓增生异常综合征患者EPO水平的测定及其受体的表达

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摘要:

目的 研究骨髓增生异常综合征(MDS)患者骨髓促红细胞生成素受体(EPOR)的表达以及血清促红细胞生成素(sEPO)水平与临床的关系,为MDS患者贫血采用EPO治疗提供理论依据。方法 对45例MDS患者采用RT-PCR法检测EPOR的表达,以夹心酶联免疫法(ELISA)测定sEPO含量,按照WHO分类诊断标准分类,其中低危组20例,包括难治性贫血(RA组)11例、难治性血细胞减少伴多系发育异常(RCMD组)9例;高危组25例,包括难治性贫血伴原始细胞增多 1(RAEB 1组)10例、难治性贫血伴原始细胞增多 2(RAEB 2组)15例。结果 45例MDS患者有25例表达EPOR,低危组患者的EPORmRNA平均表达量为0.6862±0.3725,与对照组无显著差异(P>0.05),高危组患者EPORmRNA平均表达量为0.4023±0.1385,显著低于对照组0.8347±0.2541(P<0.05)。低危组患者sEPO平均含量为(13.91±7.70) IU/L,显著低于对照组(20.57±9.06) IU/L(P<0.05);高危组sEPO平均含量为(30.68±14.08) IU/L,显著高于对照组(20.57±9.06) IU/L(P<0.05)。结论 sEPO水平减低在低危组起重要作用;高危组EPOR表达降低或缺失,但sEPO水平显著升高,表明EPOR表达水平降低为高危MDS患者红系异常的主要原因,对MDS患者临床采用EPO治疗具有指导意义。

关键词: 促红细胞生成素; 促红细胞生成素受体; 骨髓增生异常综合征; 贫血

Level of erythropoietin and expression of the erythropoietin receptor in Myelodysplastic Syndrome

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Abstract:

Objective To determine expression of erythropoietin receptor(EPOR) and level of serum erythropoietin (sEPO) in Myelodysplastic Syndrome(MDS) and their relation with clinical status of MDS patients, so as to provide a theoretical basis for the EPO therapy for MDS with anemia. Methods EPOR was detected in 45 MDS patients using reverse transcription polymerase chain reaction (RT-PCR), and the level of sEPO was detected by enzyme linked immunosorbent assay (ELISA) in 11 patients with refractory anemia (RA), 9 patients with refractory cytopenia accompanied by multilineage(RCMD), 10 patients with refractory anemia accompanied by excessive blasts-1(RAEB-1) and 15 patients with refractory anemia accompanied by excessive blasts-2(RAEB-2). The patients were divided into the low-risk group(RA and RCMD) and the high-risk group(RAEB-1 and RAEB-2) according to the categorization of WHO. Results EPOR was expressed in 25 among 45 MDS patients. The relative level of EPOR mRNA expression had no significant difference between low-risk MDS patients and the control group (0.6862±0.3725 vs 0.8347±0.2541, P>0.05), while in high-risk MDS patients it was significantly lower than that in the control group (0.4023±0.1385 vs 0.8347±0.2541)(P<0.05). The level of sEPO in low-risk MDS patients was significantly lower than that of the control group [(13.91±7.70) IU/L vs (20.57±9.06) IU/L, P<0.05]; while in high risk MDS patients [(30.68±14.08) IU/L] it was significantly higher (P<0.05). Conclusion Lower sEPO level might play an important role in low-risk MDS patients. Expression of EPOR in high-risk patients was decreased or deleted, while the level of sEPO was significantly increased. Decreased expression of EPOR might cause erythroid abnormality in high-risk MDS patients, thus providing a clue for the EPO therapy for MDS.

Keywords: Erythropoietin; Erythropoietin receptor; Myelodysplastic syndrome; Anemia

收稿日期 2010-08-27 修回日期 网络版发布日期

DOI:

基金项目:

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