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## 阿霉素海藻酸钠微球栓塞对兔肝VX2移植瘤血管生成的影响

### Effect of transcatheter arterial chemoembolization with Alginate microspheres-Adriamycin on angiogenesis in rabbit hepatic VX2 carcinoma

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英文关键词: [Adriamycin](#) [Alginate](#) [Chemoembolization](#) [Vascular endothelial growth factor](#) [Microvessel density](#)

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中文摘要:

目的 观察阿霉素海藻酸钠微球对兔VX2肝移植瘤的化疗栓塞术后肿瘤血管生成的影响。方法 30只新西兰大白兔,于肝左叶植入VX2肿瘤组织块,建立肝移植瘤模型,随机分为5组,每组6只。开腹游离肝动脉,经肝动脉楔入法分别给予空白海藻酸钠微球(A组)、阿霉素海藻酸钠微球(B组)、超液化碘油(C组)、超液化碘油+阿霉素(D组),对照组(E组)给予生理盐水。治疗后第3周将所有实验动物处死,取肿瘤标本进行大体观察及免疫组化染色,分析血管内皮生长因子(VEGF)免疫组化结果及微血管密度(MVD)计数情况。结果 A、B、C、D、E五组间VEGF的表达阳性率分别为66.67%、50.00%、100%、83.33%、66.67%,组间比较差异无统计学意义( $P>0.05$ )。MVD计数分别为 $55.36\pm 7.02$ 、 $41.27\pm 8.45$ 、 $82.42\pm 6.23$ 、 $67.81\pm 11.42$ 、 $62.46\pm 7.54$ ,C组MVD值高于A组和B组( $P<0.05$ );B组MVD值低于D组( $P<0.05$ )。Spearman等级相关分析显示VEGF与MVD相关系数为0.726( $P<0.01$ )。结论 阿霉素海藻酸钠微球化疗栓塞可使兔VX2肝移植瘤VEGF表达和MVD数目下降,但不排除其快速闭塞肿瘤血管,导致肿瘤明显坏死。

英文摘要:

Objective To evaluate the influence of transcatheter arterial chemoembolization (TACE) with Alginate microsphere-Adriamycin on angiogenesis in VX2 liver tumor. **Methods** Thirty New Zealand rabbits were randomly divided into 5 groups (each  $n=6$ ), and VX2 carcinoma was implanted in the left lobes of the livers. TACE was performed with Alginate microsphere (Group A), Alginate microsphere-Adriamycin (Group B), Lipiodol (Group C), Lipiodol-Adriamycin (Group D), and control group (Group E), respectively. Three weeks later, the animals were killed and the samples were evaluated with immunohistochemical reaction to examine the VEGF expression and MVD count. **Results** The positive rate of VEGF expression was 66.67%, 50.00%, 100%, 83.33% and 66.67% respectively in five groups ( $P>0.05$ ). MVD count was  $55.36\pm 7.02$ ,  $41.27\pm 8.45$ ,  $82.42\pm 6.23$ ,  $67.81\pm 11.42$  and  $62.46\pm 7.54$  respectively in five groups. MVD value of group C was higher than that of group A and group B ( $P<0.05$ ); of group B was lower than that of group D ( $P<0.05$ ). Spearman rank correlation analysis showed a correlation coefficient of 0.726 between VEGF and MVD ( $P<0.01$ ). **Conclusion** TACE with Alginate microsphere-Adriamycin can reduce VEGF expression and MVD of VX2 liver tumor in rabbits, but the possibility of tumor blood vessels rapid occlusion and therefore resulting in tumor necrosis can not be ruled out.

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