探讨乳腺癌MR动态增强图像的血管表现与肿瘤形态、大小及病理分级的相关性

Relation of vascular performance of MR dynamic contrast enhanced imaging and tumor shape, size and pathological grade of breast cancer

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中文摘要：

　　目的　探讨乳腺癌3.0T MR动态增强图像中血管表现与肿瘤形态、大小及病理分级的相关性。 方法 对53例乳腺癌术前患者(54个病灶)行双侧乳腺3.0T MR动态增强扫描,重建得到3D MIP图像,分别对图中病灶邻近血管、患侧与对侧的差异血管数目进行评分,分析其与肿瘤形态、肿瘤最大径及浸润性导管癌病理分级之间有无相关性。 结果 ①肿块型、非肿块型乳腺癌的差异血管数目评分、邻近血管数目评分差异均无统计学意义(P均>0.05)。②肿块型乳腺癌肿瘤最大径与差异血管数目评分无相关性(P>0.05),与肿瘤邻近血管数目评分呈正相关(r=0.46,P<0.01);非肿块型乳腺癌肿瘤最大径与差异血管数目评分呈正相关(r=0.57,P<0.05),与肿瘤邻近血管数目评分呈正相关(r=0.79,P<0.01);总体乳腺癌的肿瘤最大径与差异血管数目评分及邻近血管数目评分均呈正相关(r=0.37、0.47,P均<0.01)。③浸润性导管癌的病理分级程度与差异血管数目评分、邻近血管数目评分均无相关性(P均>0.05)。 结论 乳腺癌MR动态增强图像血管表现与肿瘤最大径有关,与肿瘤的形态及浸润性导管癌的病理分级程度无关。

英文摘要：

Objective To investigate the correlation between the vascular performance of MR dynamic contrast-enhanced imaging and tumor shape, size and pathological grade of breast cancer. **Methods** Totally 53 patients (54 lesions) with breast cancer underwent bilateral breast 3.0T MR dynamic contrast-enhanced scan to get the 3D maximum intensity projection images. Scores of the adjacent blood vessels and the different blood vessels between bilateral breasts were estimated. Correlation of vessels scores and tumor morphology (mass type and non-mass type), the maximal size of tumor and pathological grade were analyzed. **Results** There was no significant difference between the score of the different blood vessels or adjacent vessels in different shapes of tumor (all P>0.05). The maximal size of mass type breast cancer had no correlation with the score of the different blood vessels (P>0.05), but had positive correlation with the score of the adjacent blood vessels (r=0.46, P<0.01). The maximal size of non-mass breast cancer had positive correlation with the score of the different blood vessels (r=0.57, P<0.05) and the adjacent blood vessels (r=0.79, P<0.01). The maximal size of the total of breast cancer including mass and non-mass breast cancer had positive correlation (r=0.37, 0.47, both P<0.01) with the score of the different blood vessels and adjacent blood vessels. The pathological grade of infiltrating ductal carcinoma had no correlation with the score of the different blood vessels nor adjacent blood vessels (both P>0.05). **Conclusion** The vascular performances of MR dynamic enhanced imaging of breast cancer are related to the maximal size of the lesion, but not to the tumor shape, nor to the grade of pathology of invasive ductal carcinoma.

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