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Cy754-Rituximab: A new receptor-targeted for specific near-infrared fluorescence imaging of sentinel lymph node

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Purpose: Cy754 was combined with Rituximab to prepare a new receptor-targeted tracer for Sentinel Lymph Node (SLN). The appropriate combination ratio of the tracer was identified, the biological property and safety limitation was tested and the SLN imaging ability of the new tracer was evaluated.

Methodology: Cy754 was combined directly with Rituximab to prepare Cy754-Rituximab. After centrifugation and purifying, the labeled rate was analyzed by instant thin-layer chromatography-silica gel, the molecular integrity was tested by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and the molecular immune activity was tested by ELISA. After the acute toxicity and the local toxicity tested, the SLN localization ability of the tracer was evaluated in the SLN animal model.

Results: Rituximab was intact and kept the immune activity in the new tracer. The Cy754 labeled rate of Rituximab was 100%. The new tracer was bacteria and pyogen free and had no toxicity to mice with local injection. After Cy754-Rituximab injection, the fluorescence imaging SLN could find in the SLN animal model. The SLN images were stable and clear for 10 hours. The location of SLN identified by the new tracer was accorded with the standard radiotracer.

Conclusion: The developed method of the new receptor-targeted tracer for SLN is simple, effective and has no radioactive burden. The new tracer was safe with local injection. It could make only SLN imaging with appropriate injection dose and could be used in the study of SLN.

Biography

Bin-Bin Cong has completed his PhD from University of Jinan, China. He has published more than 10 papers in reputed journals and has been serving as an Editorial Board Member of reputed.

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