Release kinetics of 5-fluorouracil-loaded microspheres on an experimental rat glioma.

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**Résumé en anglais**

**BACKGROUND:** Biodegradable loaded systems are promising devices for controlled and sustained release of anticancer drugs to brain tumours. We investigated the influence of drug-release profiles of 5-fluorouracil-loaded microspheres designed for the treatment of malignant gliomas.

**MATERIALS AND METHODS:** 2.5 mg 5-FU delivered by either fast (1 formulation) or slow-(2 formulations) 5-FU release microspheres (MS) were tested in C6-glioma rat brains. Tumor response was assessed by T2-weighted MRI.

**RESULTS:** All treated animals, whatever the release profile considered, displayed a comparable 50% increase in life span versus controls. Delays in C6-glioma development appeared to correspond to the in vitro release periods of MS. In terms of curative prospect, complete remission was only observed in 11% of 5-FU-treated animals (4 out of 38).

**CONCLUSION:** Formulation was unambiguously implicated in the response observed after local delivery of 5-FU to glioma.
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