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CORRECTION

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Correction: Injectable postoperative enzyme-responsive hydrogels for reversing temozolomide resistance and reducing local recurrence after glioma operation

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Correction for 'Injectable postoperative enzyme-responsive hydrogels for reversing temozolomide resistance and reducing local recurrence after glioma operation' by Zongren Zhao *et al.*, *Biomater. Sci.*, 2020, **8**, 5306–5316, DOI: 10.1039/D0BM00338G.

The authors regret that an error was made in the writing of O^6-benzylguanine (BG) in both the Abstract and the Materials and methods sections of the article. The authors note that this correction has no effect on the results reported, nor does this change alter any of the contents and conclusions of the paper. The authors sincerely apologize for these errors. The correct versions are shown below:

Abstract

Glioma is the most aggressive primary malignant brain tumor. The eradication of the gliomas by performing neurosurgery has not been successful due to the diffuse nature of malignant gliomas. Temozolomide (TMZ) is the first-line agent in treating gliomas after surgery, and its therapeutic efficacy is limited mainly due to the high activity levels of the DNA repair protein O^6-methylguanine-DNA methyltransferase (MGMT) in glioma cells. Herein, we used an injectable matrix metalloproteinase (MMP) enzyme responsive hydrogel that loaded TMZ and O^6-benzylguanine (BG) (MGMT inhibitor) for eradicating residual TMZ-resistant gliomas after surgery. The hydrogels exhibited three features: (1) TMZ and BG could be encapsulated within the hydrophobic lamellae of the hydrogel to form Tm (TMZ + BG) hydrogels; (2) the hydrogels could release TMZ and BG in response to the high concentration of MMP enzymes after glioma surgery; (3) the hydrogels could increase local TMZ concentration and reduce side effects of BG. *In vivo*, the Tm (TMZ + BG) hydrogels inhibited the MGMT expression and sensitized TMZ-resistant glioma cells to TMZ. Moreover, the Tm (TMZ + BG) hydrogels effectively reduced the recurrence of TMZ-resistant glioma after surgery and significantly enhanced the efficiency of TMZ to inhibit glioma growth. Together, these data suggest that an MMP-responsive hydrogel is a promising localized drug delivery method to inhibit TMZ-resistant glioma recurrence after surgery.

2. Materials and methods

2.1 Materials

Triglycerol monostearate, Tm was bought from Co., Ltd (Dalian, China). D-Luciferin potassium salt and temozolomide (TMZ) were obtained from Dalian Meilun Biotech Co., Ltd (Dalian, China). O^6-Benzylguanine (BG) and 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) were bought from Shanghai Macklin Reagent Co., Ltd (Shanghai, China) and Beijing Zhongshuo Pharmaceutical Technology Development Co., Ltd (Beijing, China), respectively. A live–dead cell staining kit and anti-MGMT rabbit monoclonal antibody [EPR4397] (ab108630) were obtained from Jiangsu Keygen Biotech Co., Ltd (Jiangsu, China) and Abcam Co., Ltd (Shanghai, China), respectively. Beta-actin mAb was purchased from Proteintech Antibodies People Trust (Chicago, IL, USA). Recombinant human MMP9 were obtained from Dalian Meilun Biotech Co., Ltd (Dalian, China). MMP9 Elisa kits were obtained from Jianglai Biotech (Shanghai, China).

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

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