

Efek toksisitas odontocem dan MTA-Angelus terhadap viabilitas sel fibroblas = Effects of odontocem and MTA-Angelus toxicity towards fibroblast cells viability

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Abstrak

ABSTRAK
Latar Belakang: MTA bersifat biokompatibel dan dapat digunakan untuk perawatan kaping pulpa. Saat ini dikembangkan semen berbasis kalsium silikat sama seperti MTA dengan penambahan steroid, yaitu Odontocem. Tujuan: Membandingkan efek toksisitas odontocem dan MTA-Angelus terhadap viabilitas sel fibroblas. Metode: Sel fibroblast embrio ayam direndam dalam larutan odontocem dan MTA-Angelus pada 24 dan 72 jam. Viabilitas sel dihitung menggunakan MTT Assay. Hasil: Pada kelompok odontocem dan MTA-Angelus, terdapat perbedaan bermakna ($p < 0,05$) dibandingkan dengan kontrol. Pada paparan 24 jam, tidak terdapat perbedaan bermakna antara odontocem dengan MTA-Angelus. Kesimpulan: Odontocem dan MTA-Angelus menurunkan viabilitas sel pada 24 jam dan meningkatkan pada 72 jam.

ABSTRACT
Background: MTA is proved to be biocompatible and can be used for pulp capping treatment. Currently, calcium silicate based cement similar to MTA with steroid, called Odontocem has been developed. Objective: To compare effects of odontocem and MTA-Angelus toxicity towards fibroblast cells viability. Method: Fibroblast cells of chicken embryonic were immersed separately in odontocem and MTA-Angelus solution for 24 and 72 hours. Cells viability was analyzed with MTT Assay. Result: There was a significant difference ($p > 0.05$) in Odontocem and MTA-Angelus group compared to control. At the 24-hour immersion, there was no significant difference between odontocem and MTA-Angelus. Conclusion: Odontocem and MTA-Angelus decreased the viability of fibroblast at 24 hours and increased them at 72 hours.; Background: MTA is proved to be biocompatible and can be used for pulp capping treatment. Currently, calcium silicate based cement similar to MTA with steroid, called Odontocem has been developed. Objective: To compare effects of odontocem and MTA-Angelus toxicity towards fibroblast cells viability. Method: Fibroblast cells of chicken embryonic were immersed separately in odontocem and MTA-Angelus solution for 24 and 72 hours. Cells viability was analyzed with MTT Assay. Result: There was a significant difference ($p > 0.05$) in Odontocem and MTA-Angelus group compared to control. At the 24-hour immersion, there was no significant difference between odontocem and MTA-Angelus. Conclusion: Odontocem and MTA-Angelus decreased the viability of fibroblast at 24 hours and increased them at 72 hours.; Background: MTA is proved to be biocompatible and can be used for pulp capping treatment. Currently, calcium silicate based cement similar to MTA with steroid, called Odontocem has been developed. Objective: To compare effects of odontocem and MTA-Angelus toxicity towards fibroblast cells viability. Method: Fibroblast cells of chicken embryonic were immersed separately in odontocem and MTA-Angelus solution for 24 and 72 hours. Cells viability was analyzed with MTT Assay. Result: There was a significant difference ($p > 0.05$) in Odontocem and MTA-Angelus group compared to control. At the 24-hour immersion, there was no significant difference between odontocem and MTA-Angelus. Conclusion: Odontocem and MTA-Angelus decreased the viability of fibroblast at 24 hours and increased them at 72 hours.; Background: MTA is proved to be biocompatible and can be used for pulp capping treatment. Currently, calcium silicate based cement similar to MTA with

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