Establishment of novel post-inflammatory irritable bowel syndrome model mice with dextran sulfate sodium

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AIM : The purpose of this study is to develop the post-inflammatory irritable bowel syndrome (PI-IBS) animal model after a healing of dextran sulfate sodium (DSS)-induced inflammatory bowel disease. **METHODS :** C57BL / 6J male mice were used. PI-IBS model was prepared by drinking freely 3% DSS until day 4, and then changing drinking water to tap water during recovery period. The myeloperoxidase (MPO) activity in the colon was measured to determine the levels of inflammation. Histological analysis was done by using HE staining. **RESULTS :** The severe tissue damage in colonic mucosa was observed on day 4, but these damage disappeared on day 14 and colonic mucosa recovered to normal. Although MPO activity on day 4 in PI-IBS model group showed a significant increase as compared to in the normal group, the activity on day 14 reduced to the normal levels. In pain experiment, an increase in visceral pain-like behaviors in PI-IBS model mice was observed on day 4, and the pain-like behaviors observed until day 14. **CONCLUSIONS :** We have established novel PI-IBS model mice that possess persistent visceral hyperalgesia without of no tissue damage.