

ABSTRACT**The Effectiveness of Combination Laxatives and Bisacodyl in the Treatment of Morphine-Induced Constipation****Deni Rizka Pertiwi**

Morphine analgesia is one of the drugs that can cause side effects constipation. Bisacodyl is one of stimulant laxatives recommended by the World Health Organization for constipation induced by morphine. The side effects of stimulant laxatives of bisacodyl can cause abdominal colic. To overcome these side effects, stimulant laxatives combined with stool softeners or osmotic laxatives. Both are combined because it can maximize the effectiveness and minimize the side effects. In Indonesia, the combination of laxatives in the market is Laxadine® that contains phenolphthalein, liquid paraffin, and glycerin. The study on effectiveness of a combination laxatives (laxadine) in case of morphine-induced constipation has never been done in Indonesia.

This study aimed to identify and examine the effectiveness of laxadine and bisacodyl on morphine-induced constipation in mice. Forty eight mice received either morphine or normal saline injection for seven days and started given laxadine and bisacodyl at day three until seven. They were examined for constipation using two parameters which were gastrointestinal transit and colonic expulsion. The laxative is effective if it showed better results than the positive control group on both observed parameters.

The results showed that the mean of gastrointestinal transit (chronic) in the positive control group (28.5%) were lower than in laxadine group (42,2%). These result indicate that the positive control group were constipated and laxadine group had increased value of gastrointestinal transit. There is no significance difference between the positive control group and bisacodyl group in this parameter. The mean number of colonic expulsion time in the positive control group (33,5 minutes) were higher than in laxadine group (8,83 minutes) and bisacodyl group (9,33 minutes). These result showed that laxadine and bisacodyl were accelerated bead expulsion time on the large intestine.

Oral laxadine had effect on the small and large intestine, while bisacodyl only affected large intestine in case of morphine-induced constipation. The result showed that laxadine was more effective treatment for constipation induced by morphine in mice.

Keyword: combination laxatives, bisacodyl, morphine, constipation