ABSTRACT

Synthesis and analgesic activity test of *N*-(3,4-dichlorobenzoyl)-*p*-aminophenol In mice (*Mus musculus*)

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The aim of this research is to synthesize *N*-(3,4-dichlorobenzoyl)-*p*-aminophenol as *p*-aminophenol derivate and examine its analgesic activity in mice. *N*-(3,4-diklorobenzoyl)-*p*-aminofenol was synthesized with *Shcotten-Baumann* method by reacting *p*-aminophenol with 3,4-diklorobenzoyl chloride. Triethylamine (TEA) and tetrahydrofuran (THF) was used as respective catalyst and solvent. The resulted compound was recrystallized by using ethanol and its purity was tested by thin layer chromatography and melting point test, The structure was confirmed with UV spectrometer, infrared spectrometer, HNMR spectrometer and mass spectrometer. Its analgesic activity tested with *Writhing test.* The pain-inhibition percentage of *N*-(3,4-dichlorobenzoyl)-*p*-aminophenol for 25mg/kg body-weight was 42,86%. In dose 50 mg/kg body-wieght was 57,71% and in the dose 100 mg/kg body-wieght was 66,29%. However, the standard compound paracetamol in the dose 25mg/kg, the pain-inhibition was 21,14%. In dose 50 mg/kg body-weight was 43,43% and in the dose 100 mg/kg body-weight was 60,00%. The resulted ED_{50} of *N*-(3,4-dichlorobenzoyl)-*p*-aminophenol was 39,14 mg/kg body-wieght and ED_{50} of standard compound paracetamol was 75,65 mg/kg body-wieght. It concluded that *N*-(3,4-dichlorobenzoyl)-*p*-aminophenol have higher analgesic activity than paracetamol.

Keyword: synthesis, *N*-(3,4-dichlorobenzoyl)-*p*-aminophenol, analgesic activity.