

## ABSTRAK

### **PENGARUH PEMBERIAN THIAMINE TERHADAP KADAR CKMB (*Creatine Kinase isoenzyme MB*) TIKUS SEPSIS YANG DIINDUKSI DENGAN *CECAL LIGATION AND PUNCTURE***

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**Latar Belakang :** Sepsis adalah suatu penyebab kematian terbanyak di ruang *Intensive Care Unit* di dunia. Di Amerika Serikat sepsis adalah penyebab kematian pada pasien dengan kondisi yang kritis, menyebabkan 750.000 orang terkena sepsis dan lebih dari 210.000 orang meninggal karena sepsis. Sedangkan di Indonesia terdapat angka kejadian sepsis 33,5% (229 dari 683 kasus) di bagian PICU/NICU RSUD Dr. Moewardi. Sepsis merupakan respon sistemik yang dapat menyebabkan defisiensi thiamine, akibatnya aktifitas piruvat dehidrogenase menurun dan produksi ATP menurun. Hal menyebabkan kegagalan organ diantaranya jantung yang mengakibatkan kadar CKMB naik.

**Tujuan :** Mengetahui pengaruh pemberian thiamine terhadap penurunan kadar CKMB tikus sepsis yang diinduksi dengan *Cecal Ligation and Puncture*.

**Metode :** Penelitian ini merupakan penelitian eksperimental. Terdapat 3 kelompok dengan masing-masing 6 subyek penelitian. Kelompok kontrol yakni dengan operasi *Sham*, kelompok dengan operasi CLP-plasebo serta kelompok operasi CLP-thiamine. Kemudian diambil sampel darah untuk mengetahui perubahan kadar CKMB subyek penelitian pada hari ke-0,1,3,7. Data yang diperoleh kemudian dianalisis menggunakan uji One-Way Anova dan *Kruskal Wallis*.

**Hasil :** Hasil analisa menunjukkan tidak adanya perbedaan yang signifikan antara kelompok CLP plasebo dan CLP thiamine di semua hari pemeriksaan. Begitu juga dengan kelompok kontrol dan CLP plasebo serta kelompok kontrol dan CLP thiamine ( $p > 0,05$ )

**Kesimpulan :** Pemberian thiamine berefek menurunkan kadar CKMB pada kelompok CLP-thiamine namun tidak signifikan.

**Kata kunci :** Sepsis, CLP, disfungsi jantung, thiamine, kadar CKMB

## ABSTRACT

### **THE INFLUENCE OF THIAMINE TO THE LEVEL OF CKMB (*Creatine Kinase Isoenzyme MB*) of SEPSIS RAT INDUCED by *CECAL LIGATION AND PUNCTURE***

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**Background** : Sepsis is a major cause of mortality in the *Intensive Care Unit* in the world. In the United States, sepsis is the leading cause of mortality in patients with critical conditions, sepsis causes 750,000 people were affected and more than 210,000 people die from sepsis. Meanwhile, in Indonesia there is the incidence of sepsis in 33.5% (229 of 683 cases) at the PICU / NICU Hospital Dr. Moewardi. Sepsis is a systemic response that can lead to thiamine deficiency, resulting in the decreased activity of pyruvate dehydrogenase and decreased ATP production. It causes organ failure including heart resulting CKMB levels rise.

**Objective** : To determine the effect of thiamine to the decline of CKMB levels in sepsis rats induced by cecal ligation and puncture.

**Method** : This research was purely experimental. There were three groups with six subjects per each. They were control group with Sham operation, the group with CLP operation with the addition of placebo, and CLP surgery groups with the addition of thiamine. In addition, the blood samples taken to determine changes in CKMB levels of study subjects on days 0, 1,3,7. The obtained data were analyzed using One-Way Anova dan *Kruskal Wallis* test.

**Result** :. Results of the analysis showed that there was no significant difference between the placebo group and CLP CLP thiamine in all the examinations. The results were also similar to the control group and the placebo and control groups CLP and CLP thiamine ( $p > 0.05$ )

**Conclusion** : Giving thiamine affect the decline of CKMB level of research subjects but it is not significant

**Keyword** : Sepsis, CLP, heart dysfunction, thiamine, levels of CKMB