INTISARI

Latar Belakang: Keracunan timbal merupakan suatu masalah dunia yang bisa merusak kesehatan manusia. Paparan timbal karena suatu pekerjaan adalah penyebab tersering dari peningkatan kadar timbal darah. Rute pemaparan timbal bisa terjadi secara enteral, inhalasi, dan kontak langsung. Timbal akan memasuki tubuh dan terdistribusikan ke organ-organ pada tubuh seperti ginjal, hati, otak, dan tulang. Paparan timbal bisa berhubungan dengan ketidaknormalan fungsi hati.

Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh timbal terhadap gangguan fungsi hati (AST, ALT, dan GGT).

Metode: Metode yang digunakan dalam penelitian ini adalah *literature review* terhadap jurnal-jurnal yang membahas tentang hubungan antara paparan timbal dengan gangguan fungsi hati.

Hasil: Terdapat 9 jurnal mengenai hubungan antara paparan timbal dan gangguan fungsi hati yang digunakan untuk *review*. Hampir semua penelitian menunjukkan bahwa terjadi kenaikan timbal darah yang signifikan pada kelompok yang terpapar timbal. Sebagian besar hasil juga menunjukkan adanya hubungan antara parameter fungsi hati (AST, ALT, dan GGT) dengan parameter paparan timbal yaitu kadar timbal dalam darah. Enam jurnal menyebutkan bahwa adanya korelasi antara paparan timbal dengan kadar serum AST. Terdapat lima jurnal yang membahas adanya hubungan antara paparan timbal dengan kadar serum ALT secara signifikan dan. Hubungan antara paparan timbal dengan kadar serum GGT yang signifikan juga disebutkan pada lima jurnal.

Kesimpulan: Paparan timbal dapat menyebabkan terjadinya gangguan fungsi dengan meningkatkan kadar serum *alanine transaminase* (ALT) atau SGPT, *aspartate transaminase* (AST) atau SGOT, dan *gamma-glutamyl transpeptidase* (GGT).

Kata kunci: timbal, gangguan fungsi hati, AST/SGOT, ALT/SGPT, GGT.

ABSTRACT

Background: Lead poisoning is a worldwide problem that can damage human health. Occupational lead exposure is the most common cause of elevated blood lead levels. The route of lead exposure can be enteral, inhalation, and direct contact. Lead will enter the body and distribute to organs in the body such as the kidneys, liver, brain, and bones. Lead exposure can be related to abnormal liver function.

Objective: This study aims to determine the effect of lead on liver dysfunction (AST, ALT, and GGT).

Method: The method used in this study was a literature review of journals that discussed the relationship between lead exposure and impaired liver function.

Result: There were 9 journals regarding the relationship between lead exposure and impaired liver function that were used for review. Almost all studies have shown that there is a significant increase in blood lead in the lead exposed group. Most of the results also showed a relationship between liver function parameters (AST, ALT, and GGT) and the lead exposure parameter, namely blood lead levels. Six journals stated that there was a correlation between lead exposure and serum AST levels. There are five journals that discuss the significant relationship between lead exposure and serum ALT levels. The association between lead exposure and significant serum GGT levels was also mentioned in five journals.

Conclusion: Lead exposure can cause dysfunction by increasing levels of serum alanine transaminase (ALT) or SGPT, aspartate transaminase (AST) or SGOT, and gamma-glutamyl transpeptidase (GGT).

Key words: lead, liver dysfunction, AST / SGOT, ALT / SGPT, GGT.