

## Studi tentang peningkatan enzim hati pekerja di industri pengolahan minyak dan gas alam Kalimantan Timur, tahun 1993

Sondakh, Augustine H.S., author

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### Abstrak

#### <b>ABSTRAK</b>

Hasil pemeriksaan berkala pada pekerja di industri pengolahan minyak dan gas alam Kalimantan timur, menunjukkan adanya peningkatan enzim-enzim hati yaitu ALT, AST, SGGT. Hal ini menunjukkan adanya gangguan fungsi hati yang masih reversibel bila tidak segera ditangani akan dapat mengakibatkan penyakit hati yang lebih berat atau dapat menyebabkan sirosis hepatis.

Timbul pertanyaan: Adakah hubungan antara peningkatan enzim hati pekerja di industri pengolahan minyak dan gas alam Kalimantan Timur dengan tempat kerja, beban kerja, kepangkatan, kegemukan, umur, dan lama kerja ?

Penelitian ini menggunakan data sekunder dengan desain penelitian Cross Sectional.

Analisis statistik data dilakukan dengan program SPSS versi 4.0, untuk mendapatkan gambaran karakteristik masing-masing variabel (univariat), bivariat dengan uji beda proporsi, perhitungan nilai 'Odds Ratio', dan confidens interval (CI) 95%.

Hasil penelitian :

- Tidak ada hubungan antara peningkatan enzim hati pekerja dengan tempat kerja yang diduga terpajan pada zat hepatotoksik.
- Ada hubungan antara peningkatan enzim hati pekerja dengan beban kerja fisik ringan, kepangkatan senior staf, umur, kegemukan.
- Tidak ada hubungan peningkatan enzim hati pekerja dengan lama kerja.

Kesimpulan hasil penelitian peningkatan enzim hati pada pekerja di industri pengolahan minyak dan gas di Kalimantan Timur dihubungkan dengan kepangkatan senioritas pekerja, umur, kegemukan, beban kerja mental yang berat sedangkan tempat kerja yang diduga terpajan pada zat hepatotoksik dan lama kerja, dengan analisis bivariat tidak ada hubungan secara statistik tetapi analisis multivariat mempunyai kontribusi walaupun hanya sedikit dengan adanya interaksi dan confounding dengan variabel lainnya.

Saran pada pekerja yang berumur di atas 45 tahun, untuk mengadakan pemeriksaan berkala setiap sekurang-kurangnya 6 bulan sekali, dan dipindahkan ketempat yang tidak terpajan pada bahan toksik. Pekerja yang mempunyai HMI >25kg/m<sup>2</sup> disarankan diet rendah kalori dan lemak, dan mengadakan olah raga teratur. Pekerja senior staf dan beban kerja mental yang tinggi disarankan waktu pemeriksaan berkala lebih pendek (sekurang-kurangnya 6 bulan sekali), istirahat waktu lebih panjang dan olah raga teratur yang sesuai.

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**ABSTRACT**

Regular medical examination has been conducted for employees of crude oil and gas industry in Kalimantan Timur. There was elevation liver enzyme test such as: ALT, AST, and GGT. This was an indication that there was some liver dysfunction, which was reversible.

The question is what is the stage of elevation, which was related with to the exposure of hepatotoxic material. Some of the variables such as: rank, work responsibility, obesity, age and duration of employment were measured.

This study used secondary data and the design of the study was Cross Sectional.

Statistical analysis was done by the use of SPSS program it had been described the characteristic of variables, using bivariat technique by Chi-Square test, to determined 'Odds Ratio' and Confidence Interval (CI) 95%.

The study confirmed that there was no relation between liver enzyme elevation and department exposure to hepatotoxic material and duration of employment. There was correlation between liver enzyme elevation and work responsibility light physical load, rank, age and obesity.

It was concluded that liver enzyme elevation was correlated with age, obesity, rank, work responsibility. How ever department with high exposure to hepatotoxic and duration of employment had no significant different if we used the bivariat test. But if we used multivariate test, it showed a contribution to the interaction and it showed a confounding with another variable.

It was suggested that: workers over 45 year should have a medical examination at least every 6 month, and it was suggested also to be transferred to other department with less exposure of hepatotoxic materials. The workers who have BMI more than 25kg/m<sup>2</sup> were suggested diet of low calorie and regular physical exercise. The workers senior staff and work responsibility who had mental work load were suggested to have a medical examination at least every 6 month, regular physical exercise and their rest pause should longer than the others.