

ABSTRACT

Background: *In these past few years, automotive industrials are developed rapidly in Indonesia, which also given an impact on the employment of the workers. In the other hand, automotive industrials produce many pollutants such as benzene, lead, and carbon monoxide that can affect healthiness (of the human body) especially on the count of platelets. Thrombocyte consist of platelet items that works to prevent blood lost by clotting which can close the wound. Automotive workers (mechanic workers) are having higher risk to exposed by more pollutants than the workers who work inside the building such as cleaning service. This research is needed to perceive the difference of the platelet count between workers whos exposed to the pollutants and workers whos not exposed to pollutants.*

Purpose: *To to perceive the difference of the platelet count between workers whos exposed to the pollutants and workers whos not exposed to pollutants.*

Methods: *This research is an analytic observational study with cross sectional design. This research was done by collected blood samples of workers whos exposed to pollutants (mechanic woorkers) at Bantul and workers whos not exposed to pollutants at Universitas Muhammadiyah Yogyakarta in the range of February until May in 2017. Platelet levels were examined from the blood sample in Balai Laboratorium Yogyakarta. Total samples is 40 samples consisted of 20 workers whos exposed to pollutants and 20 workers whos exposed to pollutants. Data was analyzed by Independent Sample T Test.*

Results and Discussion: *The average value of platelet count of workers whos exposed to pollutants is 269,35 and workers whos not exposed to pollutants is 269,30. So, it conclude that average value of platelet count of workers whos exposed to pollutants is lower than workers whos not exposed to pollutants. There is no meaningful difference of platelet count between workers whos exposed to pollutants and workers whos not exposed to pollutants. It can be proven from the result of Independent Sample T Test which showed $p > 0,05$ ($p = 0,889$).*

Conclusion: *This research concluded that there is no difference of platelet count between workers whos exposed to pollutants and workers whos not exposed to pollutants.*

Keyword: *platelet count, workers whos exposed to pollutants, workers whos not exposed to pollutants*

INTISARI

Latar belakang: Perkembangan industri beberapa tahun terakhir di Indonesia terutama industri otomotif semakin pesat. Industri yang berkembang pesat meningkatkan jumlah lapangan kerja. Di sisi lain, industri otomotif menghasilkan bermacam-macam polutan seperti benzene, timbal (Pb), dan karbon monoksida yang dapat mengganggu kesehatan tubuh terutama dapat mempengaruhi jumlah trombosit dalam tubuh. Trombosit merupakan butir-butir pembeku-platelet yang berfungsi mencegah hilangnya darah dengan cara melakukan penggumpalan untuk menyumbat pada daerah yang dapat mengakibatkan kehilangan darah. Pekerja di bidang otomotif seperti pekerja bengkel mempunyai risiko terpajan polutan lebih tinggi dibanding dengan pekerja yang bekerja di dalam ruangan seperti pekerja *cleaning service*. Penelitian ini diperlukan untuk mengetahui perbedaan jumlah trombosit antara pekerja terpajan polutan dengan pekerja tidak terpajan polutan.

Tujuan: Untuk mengetahui perbedaan jumlah trombosit antara pekerja terpajan polutan dengan pekerja tidak terpajan polutan.

Metode penelitian: Penelitian ini merupakan penelitian observasional analitik dengan desain *cross sectional*. Penelitian ini dilakukan pengambilan sampel darah pada pekerja terpajan polutan (pekerja bengkel) di Bantul dan pekerja tidak terpajan polutan di Universitas Muhammadiyah Yogyakarta pada bulan Februari-Mei 2017. Semua sampel darah diperiksa jumlah trombosit di Balai Laboratorium Yogyakarta. Besar sampel total yang digunakan adalah sebanyak 40 sampel yang terdiri dari 20 sampel pekerja terpajan polutan dan 20 sampel pekerja tidak terpajan. Data selanjutnya dianalisis dengan *Independent Sample T-Test*.

Hasil Penelitian: Nilai rata-rata jumlah trombosit pada pekerja terpajan polutan, yaitu 269,35 dan nilai rata-rata jumlah trombosit pada pekerja tidak terpajan polutan, yaitu 269.30 sehingga didapatkan nilai rata-rata jumlah trombosit pada pekerja terpajan polutan lebih tinggi daripada pekerja tidak terpajan polutan. Tidak terdapat perbedaan bermakna jumlah trombosit antara pekerja terpajan polutan dengan pekerja tidak terpajan polutan. Hal ini dapat dibuktikan dari hasil $p > 0,05$ ($p = 0,889$) dengan menggunakan *Independent Sample T Test*.

Kesimpulan: Dari penelitian ini dapat disimpulkan bahwa tidak ada perbedaan jumlah trombosit antara pekerja terpajan polutan dengan pekerja tidak terpajan polutan.

Kata kunci: jumlah trombosit, pekerja terpajan polutan, pekerja tidak terpajan polutan.

