# Pengaruh penyelaman tunggal dekompresi terhadap peningkatan persentase agregasi maksimal trombosit pada penyelam dislambair = The effect of single decompression dives on increased the percentage of maximal platelet aggregation in dislambair divers / Willy

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Abstrak

[ABSTRAK<br>
Latar Belakang: Pelepasan gelembung gas inert akibat supersaturasi jaringan dengan perubahan tekanan dipercaya sebagai penyebab decompression sickness. Gelembung gas dapat dideteksi melalui USG Doppler tetapi sensitivitas dan spesifisitas terhadap decompression sickness dipertanyakan. Perubahan fisiologis tubuh berupa peningkatan agregasi trombosit diduga berperan dalam terjadinya decompression sickness. Peningkatan agregasi trombosit terbukti pada penyelaman 60 msw.
Tujuan: untuk membuktikan penyelaman tunggal dekompresi 280 kPa dapat mengakibatkan peningkatan agregasi trombosit.
Metode: Penelitian eksperimental desain cross over dengan melibatkan delapan belas penyelam laki-laki dislambair. Semua penyelam akan melakukan penyelaman kering dengan udara pada tekanan 280 kPa selama 80 menit dengan kontrol masuk ke dalam RUBT tanpa ditekan pada periode pertama. Pada periode kedua kelompok perlakuan dan kontrol ditukar. Prosedur dekompresi disesuaikan dengan prosedur tabel dekompresi US Navy Revisi 6. Pengambilan darah dilakukan sebelum perlakuan, setelah periode pertama, dan setelah periode kedua. Pemeriksaan agregasi trombosit menggunakan induktor ADP, kolagen dan epinefrin.
Hasil: Setelah penyelaman tunggal dekompresi 280 kPa selama 80 menit secara signifikan meningkatkan persentase agregasi maksimal trombosit dengan induktor ADP dari 86.94 ± 4.11 menjadi 90.46 ± 3.41, dengan induktor kolagen dari 91.94 ± 2.62 menjadi 94.69 ± 2.25, dan induktor epinefrin dari 86.65 (22.10-93.8) menjadi 90.25 (31-95.9) pada kelompok sebelum perlakuan dan setelah perlakuan. Tidak ditemukan peningkatan signifikan persentase agregasi maksimal trombosit pada kelompok sebelum perlakuan dengan kontrol
Kesimpulan: Penyelaman tunggal dekompresi 280 kPa selama 80 menit meningkatkan persentase agregasi maksimal trombosit dengan induktor ADP, kolagen, dan epinefrin.
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ABSTRACT<br>
Background: The release of inert gas bubbles due to changes in tissue?s supersaturating with pressure change is believed to be the cause of decompression sickness. Gas bubbles can be detected by Doppler ultrasonography but sensitivity and specificity is poorly defined. Increased of platelet aggregation is estimated have a role in DCS. Increasing platelet aggregation has been proved in dive with depth 60 MSW.
Aim: To prove that a single decompression dives 280 kPa can lead to increased platelet aggregation.
Methods: Experimental studies with a cross-over design involving eighteen male dislambair divers. All divers will dive in air compression chamber at a pressure of 280 kPa for 80 minutes with control entry into air compression chamber without pressure in the first period. In the second period, treatment and control

group exchanged. Decompression procedures adapted to the US Navy decompression tables procedures 6th Revision. Taking blood performed before the intervention, after first period, and after second period. Examination of platelet aggregation using inductors ADP, collagen and epinephrine.
Result: A single decompression dive 280 kPa for 80 minutes significantly increased the percentage of maximal platelet aggregation with ADP inductor from 86.94±4.11 to 90.46±3.41, with a collagen inductor from 91.94±2.62 to 94.69±2.25, and epinephrine inductor from 86.65 (22.10-93.8) to 90.25 (31-95.9) in before and after treatment group. Increasing percentage of maximal platelet aggregation was not significant in the before treatment group and control group.
Conclusion: A single decompression dive 280 kPa for 80 minutes can lead to increase the percentage of maximal platelet aggregation with ADP, collagen, and epinephrine inductors, Background: The release of inert gas bubbles due to changes in tissue's supersaturating with pressure change is believed to be the cause of decompression sickness. Gas bubbles can be detected by Doppler ultrasonography but sensitivity and specificity is poorly defined. Increased of platelet aggregation is estimated have a role in DCS. Increasing platelet aggregation has been proved in dive with depth 60 MSW.
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