

Pengaruh penyelaman tunggal dekompresi terhadap penurunan ekspresi eNOS sebagai penanda disfungsi endotel pada penyelam dislambair TNI AL = Single decompression dives reduces eNOS expression as a markers endothelial dysfunction in dislambair Indonesian navy diver / Aditya Handoko H.

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Abstrak

[ABSTRAK

Latar Belakang : Decompression sickness (DCS) masih menjadi masalah, walaupun dekompresi telah dilakukan sesuai dengan prosedur[1,2,3] Insiden pada recreational diving 2-4 per 10.000 penyelaman[1]. Patofisiologi terjadinya DCS tidak hanya terjadi akibat mekanisme obstruksi dari gelembung gas[3,4], namun dikaitkan dengan gangguan terhadap fungsi fisiologis NO[2,3,4,5].

Metode : Penelitian ini merupakan studi eksperimental dengan desain cross over pada 16 orang penyelam laki-laki Dislambair Koarmatim TNI AL. Data diperoleh melalui kuesioner, pemeriksaan fisik dan laboratorium ekspresi eNOS menggunakan teknik kuantitatif ELISA sandwich, yang diberi perlakuan penyelaman tunggal dekompresi US Navy 280 kPa dalam RUBT.

Hasil : Terdapat penurunan ekspresi eNOS yang bermakna pada kelompok hiperbarik ($p<0,001$) dan perbedaan selisih ekspresi eNOS antara kelompok normobarik dan hiperbarik yang bermakna ($p=0,01$). Korelasi IMT dengan ekspresi eNOS sebelum dan sesudah perlakuan pada kelompok hiperbarik dan sebelum perlakuan pada kelompok normobarik berlawanan arah. Korelasi antara kebiasaan merokok dengan ekspresi eNOS sebelum dan sesudah perlakuan pada kelompok normobarik adalah sedang

Kesimpulan dan Saran: Penurunan ekspresi eNOS pada kelompok hiperbarik ($p<0,001$) dan selisih rerata ekspresi eNOS antara kelompok normobarik dan hiperbarik ($p=0,001$). Memperhatikan faktor individu, yaitu IMT dan kebiasaan merokok pada prosedur penyelaman dan diperlukan kajian medik langkah preconditioning sebelum penyelaman

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ABSTRACT

Background : Decompression sickness (DCS) is still a problem, even though decompression has been performed in accordance with the procedures[1,2,3] recreational diving incident at 2-4 per 10,000 dives[1]. Path physiology of DCS not only occur due to obstruction mechanism of gas bubbles[3,4], but is associated with disruption of physiological functions NO[2,3,4,5].

Methods : This study is an experimental study with cross-over design in 16 male divers Dislambair Koarmatim Navy. Data obtained through questionnaires , physical examination and laboratory eNOS expression using quantitative techniques sandwich ELISA, which treated single dive decompression US Navy 280 kPa in hyperbaric chamber.

Results : Significant reduction in eNOS expression in the hyperbaric group($p<0.001$) and the difference in eNOS expression differences between groups normobaric and hyperbaric($p=0.01$). IMT correlation with the eNOS expression before and after treatment in the hyperbaric group and before treatment in group normobaric opposite direction. The correlation between smoking and eNOS expression before and after

treatment in group normobaric is being

Conclusions and Recommendations : A reduction in eNOS expression in the hyperbaric group($p < 0.001$) and the mean difference between groups normobaric eNOS expression and hyperbaric($p = 0.001$) . Attention to individual factors , namely BMI and smoking habits on the procedures required dives and medical studies preconditioning step prior to the dive, Background : Decompression sickness (DCS) is still a problem, even though decompression has been performed in accordance with the procedures[1,2,3] recreational diving incident at 2-4 per 10,000 dives[1]. Path physiology of DCS not only occur due to obstruction mechanism of gas bubbles[3,4], but is associated with disruption of physiological functions NO[2,3,4,5].

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