menunjukkan perbedaan yang signifikan dengan p= 0.003 (p<0.05). Dari kedua hal tersebut dapat disimpulkan bahwa terapi oksigen hiperbarik memengaruhi jendela implantasi pada tikus betina (*Rattus novergicus* strain Wistar).

SUMMARY

THE EFFECTS OF HYPERBARIC OXYGEN THERAPY ON THE EXPRESSION OF NF-Kb AND αvβ3 INTEGRIN IN FEMALE MOUSE'S (*Rattus novergicus* Wistar's Strain) ENDOMETRIUM AT WINDOW OF IMPLANTATION

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Embryo implantation is an absolute requirement to keep the growth of an embryo. The successfuly embryo's implantation needs good embryo's quality, good endometrial receptivity and a good dialogue between the embryo and the endometrium. There are many successes inways to improve the embryo's quality, especially in the assisted reproductive technology. In contrast, endometrial receptivity has failed to benefit from parallel improvement of the embryo.

Mitrovic (2006) founds, the application of hyperbaric oxygen therapy improves the quality of endometrium. However, the effects of hyperbaric oxygen therapy on the implantation window are still not known, especially at the molecular level. Based on that report, the researcher wants to know what does the effects of hyperbaric oxygen therapy on the expression of NF-κB and αVβ3 integrin in female mouse's (*Rattusnovaergicus*Wistar's strain) endometrium at window of implantation? The hypothesis of this research is there are any different in the expression of NF-κB and αVβ3 integrin in female mouse's (*Rattusnovaergicus*, Wistar's strain) endometrium at window of implantation.

The design of this experiment was pre-posttest control groups design. The homogenized control group acts as pre-test group and the treatment group act as post-test group. The animals divided into two groups (either contain six animals), control and treatment groups. The control group got 1 ATA pressure for 90 minutes in the animal chamber for ten sessions, started in the first day of estrous cycle and the treatment group got 2.4 ATA, three times for 30 minutes with air breaks for 5 minutes, started in the first day of estrous cycle. After treatments were done, all animals were rested for one estrous cycle. In the next first day of estrous cycle all of animals mated with male mouse (vasectomized before). The next day after mated, all of animals were checked for vaginal plug. Animal model which did not contain vaginal plug were dropped out, the opposite one's was said in day one of pseudo pregnancy. In the fourth day of pseudo pregnancy, the uteri of all animal models werehystrectomized, checked for implantation embryo (black dots). If the uterus was contained black dots, the uterus was dropped out. The negative one's was checked for the expression of NF-κB and αVβ3 integrin.Immunohistochemistry was performed to study the expression of NF-κB and αVβ3 integrin, based on modified Rammelle's method.

The result of NF-κB examination was 1.033 ± 1.2853 for control group and 3.233 ± 3.1111 for treatment group. The Kolmogorov-Smirnov test were p=0.97 for control group and p=0.774 (p>0.05) for treatment group. Based on that result, it was concluded that the data were normally distributed. The statistics analysis (T test for two samples was used) was p= <0.05, it was significant differences in expression of NF-κB. The expression of αVβ3 integrinwas 0.83 ± 1.1103, for control group and 6.53 ±1.64216 for treatment group. The Kolmogorov-Smirnov test were p=0.971 and p=0.680 for treatment group (p>0.05). It meant that the datas were normally distributed. The statistics analysis (T Test for two samples was used) was p= 0.003 (p<0.05). Accordingto the results, it can be concluded that hyperbaric

oxygen treatment affectsthe window of implantation in the female mouse (Rattusnovergicus, Wistar's strain)