

REPRODUCTIVE LITERATURE

Bosn J Basic Med Sci. 2006 May;6(2):21-4.

Hyperbaric oxygenation as a possible therapy of choice for infertility treatment.

Mitrović A, Nikolić B, Dragojević S, Brkić P, Ljubić A, Jovanović T.

Endometrial sonographic and color doppler features can be used to predict the occurrence of pregnancy in natural or stimulated cycles. Implantation will usually only take place if the endometrium has reach a certain stage of vascularisation and development. The aim of this study was to evaluate endometrial development -- endometrial thickness and reflectivity , subendometrial, endometrial and uterine perfusion, after hyperbaric oxygenation, using transvaginal color doppler. During a three years period 32 women with unexplained infertility were entered into a randomised study. The patients were treated in multiplaced HAUX chamber at pressure of 2.3 ATA during 70 minutes, 7 days consecutively beginning with day 5th of menstrual cycle. The evaluation of effects of hyperbaric oxygen therapy was carried out by transvaginal color doppler sonography which was continuously used starting from 8th day of menstrual cycle until the ovulation in the cycles when the therapy was applied , one month before and one month after the therapy.

Folliculometry in the cycles when hyperbaric oxygen therapy at 2.3 ATA was applied, indicated an excellent response of endometrium. Thickness of endometrium at the time of ovulation was 11.0 +/- 2.6 mm. Desirable quality of endometrium was significantly better in the cycle when HBO therapy had been applied (p< 0.001). The doppler flowmetry of the uterine arteries indicated that the uterine blood vessel resistance was slightly higher than expected. Mapping of subendometrial blood vessels in the cycles covered by hyperbaric oxygen therapy showed the intensive capillary network of endometrium with low resistance $R_i < 0.45$. The oxygen used under higher pressure -- oxygen as a drug , may have an extraordinary significance for better outcome of pregnancy implantation by improving endometrial receptivity. If endometrial receptivity is conditioned by adequate vascularisation and oxygenation, then hyperbaric oxygen therapy is the treatment of choice.

Fertil Steril. 2005 Jan;83(1):226-8.

Hyperbaric oxygen and ovarian follicular stimulation for in vitro fertilization: a pilot study.

Van Voorhis BJ, Greensmith JE, Dokras A, Sparks AE, Simmons ST, Syrop CH.

Our objective was to assess the safety and tolerability of hyperbaric oxygen therapy (HBO) as an adjunct to IVF therapy in women with a poor prognosis for pregnancy in a prospective observational pilot study.

We conclude that HBO is well tolerated by women undergoing IVF treatment and that further study is required to determine whether this is an efficacious adjuvant therapy for women being treated by IVF.

Undersea Hyperb Med. 2004 Summer;31(2):245-50.

Report of the use of hyperbaric oxygen therapy (HBO2) in an unusual case of secondary infertility.

Leverment J, Turner R, Bowman M, Cooke CJ.

We report the use of hyperbaric oxygen therapy (HBO2) in the treatment of an unusual case of secondary infertility. The patient had failed to conceive after a 1-year period of in-vitro fertilization, during which oral sildenafil had also been administered. However she became pregnant after an IVF cycle and the use of adjunctive HBO2 and sildenafil, which was administered intravaginally on this occasion. There is currently very little evidence to support the use of HBO2 in this context. The possible mechanisms of action of HBO2 in this case are discussed.



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Urologiia. 2001 Jan-Feb;(1):27-30.

Hyperbaric oxygenation in the treatment of patients with chronic congestive prostatitis and lower fertility

Zadoev SA, Evdokimov VV, Rumiantsev VB, Osmolovskii EO.

Due to deteriorated demographic indices in the country, male infertility is a highly pressing problem. Chronic prostatitis is one of its causes. Hyperbaric oxygenation was used to affect male genital microcirculation, thus improving the spermatoc morphological and functional characteristics. Positive effects of the method are ascribed not only to better microcirculation, but also to improved redox processes in spermatogenesis.