

Peningkatan respon imun seluler istri pasangan infertil tidak terjelaskan melalui uji Mixed Lymphocyte Reaction (MLR) = The increasing of cellular immune response in women of unexplained infertile couple using mixed lymphocyte reaction (MLR) test / Fitand Brilliane Natalia

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Abstrak

ABSTRAK

Latar Belakang. Infertilitas merupakan sumber keluhan dan kecemasan pada pasangan suami istri. Infertilitas dialami oleh sekitar 50 – 80 juta pasangan di dunia. Di Indonesia terdapat kurang lebih 12 pasangan infertil. Salah satu penyebab gangguan kesuburan atau infertilitas yang dialami pasangan suami istri adalah yang penyebabnya tidak terjelaskan unexplained . Dikatakan infertil tidak terjelaskan karena pada semua pemeriksaan standar pasangan suami istri termasuk tes ovulasi, patensi tuba dan analisis sperma berada dalam keadaan normal. Sebagian besar masalah infertil tidak terjelaskan dikaitkan dengan gangguan imunologi yang terjadi antara suami istri, dengan adanya perubahan peningkatan indeks proliferasi limfosit sebagai indikator. Metode. Dilakukan pengambilan sampel darah tepi dan pemisahan SMDT pasangan infertil tidak terjelaskan. Sebelum dilakukan kultur MLR Mixed Lymphocyte Reaction , SMDT suami diinkubasi dengan Mitomycin C. Kultur MLR SMDT suami dan istri selama 72 jam. Dilakukan labelling sel dengan BrdU untuk mengetahui indeks proliferasi yang menunjukkan nilai proliferasi sel limfosit. Hasilnya dibandingkan dengan istri pasangan fertil. Hasil. Dari 11 pasangan Infertil tidak terjelaskan dan 4 pasangan fertil, terdapat perbedaan yang bermakna antara indeks proliferasi sel limfosit istri dengan medium standar pasangan infertil tidak terjelaskan dibandingkan indeks proliferasi sel limfosit istri pasangan fertil $p = 0,01$. Terdapat perbedaan yang bermakna antara indeks proliferasi sel limfosit istri yang diberi stimulan IL2 pasangan infertil tidak terjelaskan dengan sel limfosit istri pasangan fertil setelah kultur 72 jam $p = 0,049$. Terdapat perbedaan yang bermakna antara indeks proliferasi sel limfosit istri pasangan infertil tidak terjelaskan dengan sel limfosit istri pasangan fertil yang di stimulasi oleh sel limfosit suami setelah kultur MLR 72 jam $p = 0,014$. Tidak terdapat perbedaan yang bermakna antara indeks proliferasi sel limfosit istri pasangan infertil tidak terjelaskan yang diberi stimulan IL2 dengan sel limfosit istri pasangan fertil yang di stimulasi oleh sel limfosit suami setelah kultur MLR 72 jam $p = 0,115$. Tidak terdapat perbedaan antara proliferasi sel limfosit pasangan infertil tidak terjelaskan dengan metode MLR pada pasangan infertil tidak terjelaskan setelah menikah lebih dari 5 tahun dan kurang dari 5 tahun $p=0,202$. Hasil penelitian ini menguatkan dugaan adanya peran imunologi sebagaian dalam terjadinya infertil tidak terjelaskan.

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ABSTRACT

Infertility is a source of worry of the couple. Infertility is occurred in 50 – 80 millions couple in the world. There is almost 12 infertile couple in Indonesia. One of the reason of this infertility problem is unexplained. Diagnosis of unexplained infertility is made when all of the basic evaluation including ovulation test, tubal patency and normal sperm analysis are established. The potential cause of unexplained infertility has been described mostly as an immunology problem, where as there is a change of lymphocyte proliferation as an indicator. Method. Peripheral blood and lymphocyte isolation were collected from

unexplained infertile couples and fertile couples. Before MLR the husband's lymphocytes were incubated with mitomycin C. The MLR between husband and wife's lymphocytes were cultured for 72 hours. The cells were labelled with BrdU to measure proliferation index that shows lymphocyte proliferation assay. The results were compared between unexplained infertile couples and controls. Result. From 11 unexplained infertile couples and 4 fertile couples, there was a significant difference between wife's lymphocyte proliferation index with the standard medium of unexplained infertile couples compared to the fertile wife's lymphocyte proliferation index $p < 0.01$. There was a significant difference between the proliferation index of wife's lymphocytes induced by IL2 stimulant of unexplained infertile couples with fertile lymphocyte cell after culture 72 hours $p < 0.049$. There was a significant difference between unexplained infertile couples lymphocyte cell proliferation index indices with the fertile wife lymphocyte cell were stimulated by husband's lymphocyte cells after culture of MLR 72 hours $p < 0.014$. There was no significant difference between unexplained infertile couples lymphocyte cell proliferation index induced by IL2 stimulant with fertile lymphocyte cells stimulated by husband lymphocyte cells after culture of MLR 72 hours $p < 0.115$. There was no difference between unexplained infertile lymphocyte cell proliferation with MLR method in unexplained infertile couples after marriage of more than 5 years and less than 5 years $p < 0.202$. The results of this study reinforce the alleged existence of immunological role in the occurrence of infertile unexplained. Keywords: unexplained infertility, MLR culture, cell proliferation, index proliferation