

Pengaruh penyuntikan kombinasi dosis rendah dan tinggi Testosteron Enantat (Te) + Depot Medroksi Progesteron Asetat (DMPA) setiap bulan terhadap fungsi hematopoietik, fungsi ginjal dan antigen spesifik prostat

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Abstrak

Ruang lingkup dan Cara penelitian: Pengembangan metoda kontrasepsi pria Cara medikamentosa yang aman, efektif dan reversibel sekarang ini adalah penyuntikan intramuskular kombinasi hormon. Penyuntikan ini dapat menekan sekresi testosteron melalui penekanan gonadotropin hipofisis. Penyuntikan ini diharapkan tidak mempengaruhi fungsi hematopoietik, fungsi ginjal dan antigen spesifik prostat relawan yang turut berpartisipasi pada penelitian ini. Kombinasi hormon yang dipergunakan adalah kombinasi dosis rendah 100 mg TE + 100 mg DMPA dan kombinasi dosis tinggi 250 mg TE + 200 mg DMPA, disuntikkan setiap bulan dalam jangka waktu 12 bulan dan pemeriksaan fungsi hematopoietik, fungsi ginjal dan antigen spesifik prostat setiap 3 bulan. Penelitian ini dibagi dalam 3 We, yaitu fase kontrol atau pra-perlakuan (1 bulan), fase penekanan (6 bulan) dan fase pemeliharaan (6 bulan). Pada fase kontrol atau pra-perlakuan dipilih 20 pria sehat dan subur yang memenuhi syarat pemeriksaan fisik dan laboratorium darah sebanyak 2 kali pemeriksaan normal, kemudian dibagi secara acak ke dalam 2 kelompok (masing masing kelompok 10 orang). Kelompok pertama mendapat penyuntikan kombinasi hormon dosis rendah dan kelompok kedua penyuntikan hormon kombinasi dosis tinggi. Parameter yang diteliti adalah: (a) fungsi hematopoietik, meliputi hematokrit, hemoglobin, leukosit, trombosit; (b) fungsi ginjal, meliputi ureum dan kreatinin darah; (c) antigen spesifik prostat.

Hasil penelitian: Pemeriksaan laboratorium menunjukkan bahwa hasil kedua kelompok berada diantara batas normal: Ht. 41.67 - 47.46 %; Hb. 14.5 - 15.58 g/dl; leukosit 7.48 - 11.54 (103/ul); trombosit 234.78 - 300.11 (103/ul); ureum 21.6 -- 28 mg/dl; kreatinin 0.92 - 1.21 mg/dl dan PSA 0.32 - 0.71 mg/dl. Setara keseluruhan penyuntikan hormon kombinasi dosis rendah 100 mg TE + 100 mg DMPA dan kombinasi dosis tinggi 250 mg TE + 200 mg DMPA tidak mempengaruhi fungsi hematopoietik, fungsi ginjal dan antigen spesifik prostat.

Kesimpulan: Penyuntikan hormon kombinasi dosis rendah 100 mg TE + 100 mg DMPA dan kombinasi dosis tinggi 250 mg TE + 200 mg DMPA setiap bulan selama 12 bulan penelitian dan setiap 3 bulan pemeriksaan laboratorium tidak menimbulkan atau mengakibatkan perubahan bermakna pada fungsi hematopoietik, fungsi ginjal dan antigen spesifik prostat, sehingga kemungkinan aman sebagai alat kontrasepsi hormonal pria.

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The Influence of Monthly Injection both a Low Dose and a High Dose Combination of TE + DMPA on the Hematopoietic and Kidney Functions and PSAScopes and methods of study: The medicinal approach to male contraception which is safe, effective and reversible is currently being investigated using a combination of hormones. The hormones, given by intramuscular injection, will suppress testosterone secretion through the suppression of gonadotropin release by the hypophysis. This study is carried out to investigate if there is any adverse effect on hematopoiesis (hematocrit, hemoglobin, leucocyte and

thrombocyte as parameters), kidney functions (serum urea and creatinine), and prostate specific antigen (serum) PSA during the use of this contraceptive means. Two hormonal combinations being evaluated are 1) a low dosage of 100 mg TE + 100 mg DMPA, and 2) a high dosage of 250 mg TE + 200 mg DMPA. The study is divided into 3 consecutive phases: control phase (1 month), suppression (6 months) and maintenance (6 months). The selected volunteers are twenty healthy and fertile males who show normal laboratory findings during the control period, which is carried out twice at a biweekly interval. They are then divided randomly into two groups of ten subjects each. Throughout the suppression and maintenance phases each member of the group receives a monthly injection of the low and high dosage hormonal combination, respectively. Venous blood samples are obtained every three months, the hematological and kidney parameters are examined at the Clinical Laboratory Department of the Cipto Mangunkusumo Hospital, and PSA measured by immunoassay (Abbott, IMx) at the Immunoendocrinology Laboratory of the Indonesia School of Medicine. The laboratory findings are analyzed by two-way anova, using a spreadsheet program (Lotus 123 or Exel).

Findings and Conclusion: The laboratory parameters of the two groups are within the normal ranges throughout the study period: Ht. 41.67 - 47.46 %, Hb. 14.5 - 15.58 g/dl, leucocyte 7.48 - 11.54 x 10³/ul, thrombocyte 234.78 - 300.11 x 10³/ul, ureum 21.6 - 28 mg/dL, creatinine 0.92 - 1.21 mg/dL and PSA 0.32 - 0.71 mg/dL. It is therefore concluded that the administration of the combination of TE and DMPA, at both low and high dosages, has no adverse effect on hematopoiesis, kidney function and the prostate, and could therefore be considered safe for use in male contraception.