Comparative meta-analysis using the forest-graph of the vegetative resonance test "IMEDIS TEST +", biochemical, functional, correlation-optical methods in diagnostics chronic nephritis Masugi

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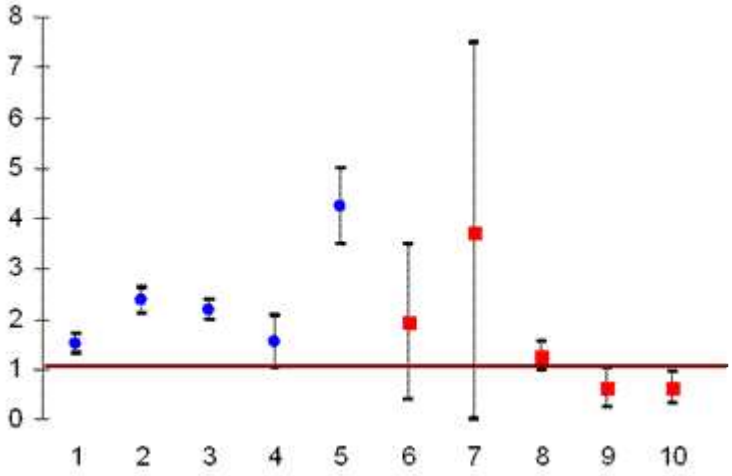
Target research - spend comparative meta-analysis with the use of forest gras physics of biochemical, functional methods, research, correlation optical vegetative resonance test "IMEDIS TEST +" in the diagnosis of chronic Masugi nephritis and the protective effect of GA-40 on the course of tubulo-interstitial syndrome.

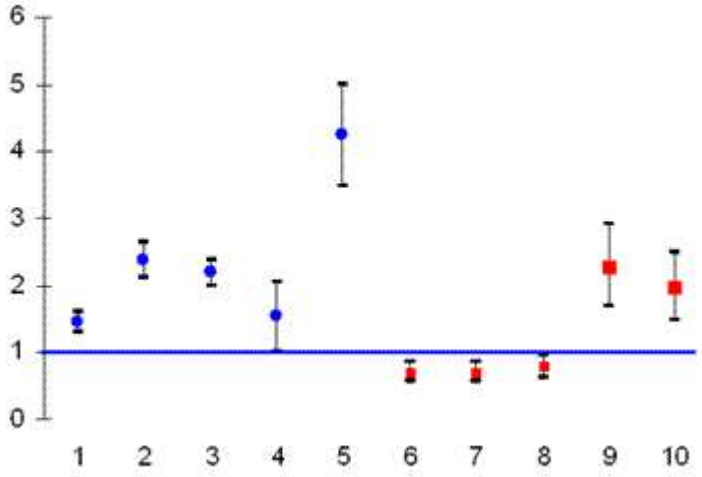
The experiments were carried out on 200 white nonlinear male rats weighing 0.16-0.18 kg. Modeling of Masugi nephritis was carried out by 2-fold intraperitoneal injection of rabbit nephrotoxic serum with a titer of antirenal antibodies in the complement binding reaction of at least 1: 1024. The studies were carried out on the 45th day, which corresponded to the development of chronic Masugi nephritis with formed tubulo-interstitial syndrome [2, 6]. The animals were euthanized by decapitation under ether anesthesia. When evaluating the samples of fragments of the cortical substance of the kidneys of rats using the vegetative resonance test "IMEDIS-TEST +", samples weighing 50-100 mg in tubes made of thin organic glass were examined in the container of the apparatus "IMEDIS-BRT-PC" using software (Registration certificate for medical equipment product No. FS 022a3066 / 0414-04, issued by the FEDERAL SERVICE FOR SUPERVISION IN THE SPHERE OF HEALTH AND SOCIAL DEVELOPMENT OF THE RUSSIAN FEDERATION dated July 8, 2004) with the definition on a bioindex scale: protein p53 (p53), fibroblast growth factor (FRF), angiotensin AII) -1β (IL-1β) [1, 3]. Bioindex scale indicators from 1 to 21 are taken as conventional units. The functional state of the kidneys was assessed by definition: excretion of potassium ions (EK + - μmol / 2 hours x 100 g), excretion of sodium ions (ENa + - μmol / 2 hours - 100 g), glomerular filtration rate

(WITH$_{cr}$ - μl / min. x 100 g), plasma creatinine concentration (P$_{cr}$ - μmol / l), proximal reabsorption of sodium ions (TrNa + - mmol / 2 hours - 100 g) [2]. Biochemical methods were used to determine in the renal cortex: the activities of the enzymes superoxide dismutase (SOD - U / min - mg protein), catalase (CT - μmol / min x mg protein), glutathione peroxidase (GPO - μmol / min x mg protein), succinate dehydrogenase (SDH - μg / h x mg of protein) and the content of hydroxyproline (OPRO - μg / g dry tissue) [2]. Correlation-optical diagnostics of the cortical layer of the kidneys was carried out with the determination of the characteristics of the crystalline substance: kurtosis of intensity, kurtosis of ellipticity, kurtosis of birefringence, kurtosis of the orientational structure ρ, kurtosis of phase displacement σ in conv. units [4]. The material was processed by the method of meta-analysis using forest graphics [5]. Forest plot (a chart used in meta-analysis and showing the estimated effect in each study and their mean with confidence

intervals) of a comparative assessment of the diagnosis of chronic Masugi nephritis using the vegetative resonance test "IMEDIS-TEST +" and a functional study of the kidneys is shown in Fig. 1. Forest graph of the comparative assessment of the diagnosis of chronic nephritis Masugi using the vegetative resonance test "IMEDIS-TEST +" and biochemical methods
shown in Fig. 2.chronic nephritis "IMEDIS-TEST +" Forest plot of comparative assessment of Masugi diagnostics using vegetative resonance test and correlation optical study
the crystalline substance of the kidney cortical layer is shown in Fig. 3. The forest plot of the comparative assessment of the anti-nephrosclerotic effects of GA-40 in tubulo-interstitial syndrome is shown in Fig. 4.

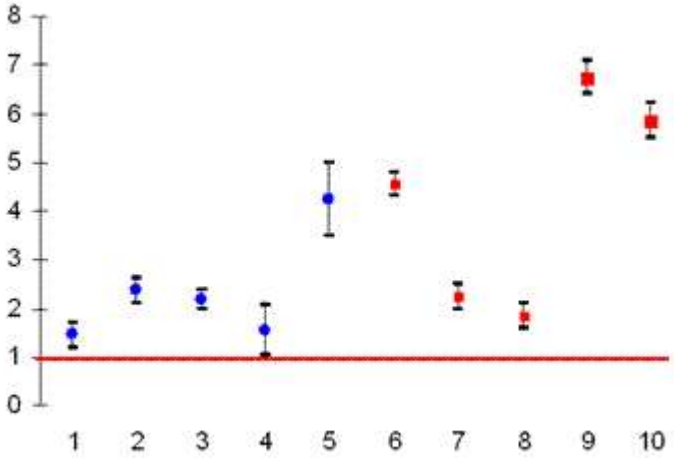


Rice. one.Forest graph of the comparative assessment of the diagnosis of chronic Masugi nephritis using the vegetative resonance test "IMEDIS TEST +" (1–5) and the functional study of the kidneys (6–10). 1 - AII, 2 - IL-1β, 3 - GPRO, 4 - FRF, 5 - p53, 6 - E Na +, 7 - E K +, 8 - PC_r, 9 - C_{cr}, 10 - TpNa +. Control for all research methods is presented as a horizontal line and is taken as unit

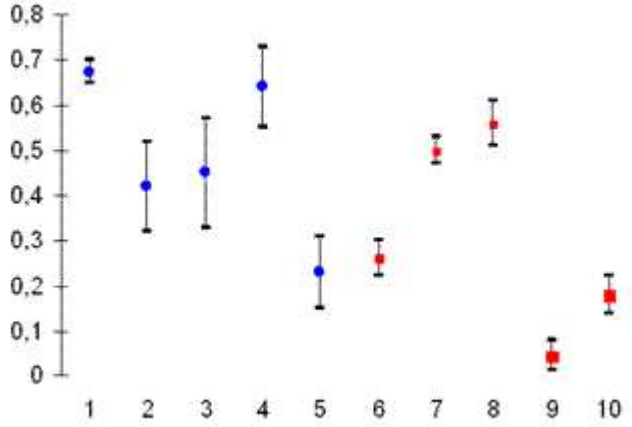


Rice. 2.Forest graph of the comparative assessment of the diagnosis of chronic nephritis Masugi using the vegetative resonance test "IMEDIS-TEST +" (1-5) and

biochemical study of the renal cortex (6–10). 1 - AII, 2 - IL1β, 3 - OPRO, 4 - FRF, 5 - p53, 6 - SOD, 7 - CT, 8 - GPO, 9 - OPRO, 10 - SDH. Control for all research methods is presented as a horizontal line and is taken as a unit



Rice. 3.Forest graph of the comparative assessment of the diagnosis of chronic Masugi nephritis using the vegetative resonance test "IMEDIS-TEST +" (1-5) and the correlation-optical study of the crystalline substance of the renal cortex (6-10). 1 - AII, 2 - IL-1β, 3 - GPRO, 4 - FRF, 5 - p53, 6 - Excess of intensity, 7 - Excess of ellipticity, 8 - Excess of birefringence, 9 - Excess of orientational structure ρ, 10 - Excess of phase shift σ ... Control for all research methods is presented as a horizontal line and is taken as a unit



Rice. 4.Forest graph of the comparative assessment of the treatment of tubulointerstitial syndrome with GA-40 using the vegetative resonance test "IMEDIS-TEST +" (1-5) and correlation-optical study
crystalline substance of the cortical layer of the kidneys (6–10). 1 - AII, 2 - IL-1β, 3 - GPRO, 4 - FRF, 5 - p53, 6 - Excess of intensity, 7 - Excess of ellipticity, 8 - Excess of birefringence, 9 - Excess of orientational structure ρ, 10 - Excess of phase shift σ ... Control (tubulo-interstitial syndrome without correction) for all methods of comparative assessment of treatment was taken as a unit

Conclusions:

1. Forest graph of the comparative assessment of the diagnosis of chronic nephritis Masugi using the vegetative resonance test "IMEDIS-TEST +" and functional study of the kidneys shows no significant differences between the comparison methods, with the exception of p53 protein, which is the most sensitive test in the diagnosis of chronic Masugi nephritis using ART "IMEDIS-TEST +".

2. Forest graph of the comparative assessment of the diagnosis of chronic nephritis Masugi, using the vegetative resonance test "IMEDIS-TEST +" and biochemical methods, shows the same sensitivity of the applied research methods with some advantage of ART "IMEDIS-TEST +" for the p53 protein.

3. Forest graph of the comparative assessment of the diagnosis of chronic nephritis Masugi with the help of the vegetative resonance test "IMEDIS-TEST +" and the correlation-optical study of the crystalline substance of the cortical layer of the kidneys shows the same sensitivity of the methods of the vegetative resonance test "IMEDIS-TEST +" with the excess of ellipticity and the excess of birefringence. Determination of p53 protein using IMEDISTEST + VRT is comparable to the excess of intensity, and the determination of the excess of the orientational structure ρ and the excess of phase shift σ is more sensitive than the VRT IMEDIS-TEST +.

4. Determination of hydroxyproline by biochemical method and ART "IMEDIS-TEST + ”shows the same sensitivity of these methods in the assessment of tubulo-interstitial syndrome using the forest-graph of meta-analysis.

5. Forest-graph of comparative assessment of anti-nephrosclerotic effects The GA-40 preparation for tubulo-interstitial syndrome shows high sensitivity of the vegetative resonance test "IMEDIS-TEST +" and the correlation-optical study of the crystalline substance of the renal cortex, with the most sensitive parameters being the determination of the excursion of the orientational structure ρ and the excess of the phase shift σ.

Perspective scientific research includes in further the use of large-scale possibilities of vegetative resonant test "IMEDIS-TEST +" for intravital diagnostics in the clinic and experiment with diseases of internal organs.

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