Background and Aims Neuroinfection is an entity with possible serious subsequent complications. Early and precise diagnosis can help in purposeful treatment and accurate prognosis. The aim of the study was the analysis of principles and value of neuroimaging in the diagnostic process in pediatric neuroinfection.

Methods The retrospective analysis comprised 74 patients diagnosed with encephalitis and/or meningitis. The cohort was divided into two groups: A (meningitis, n=45) and B (encephalitis and meningoencephalitis, n=29). Data obtained from medical records (medical history, signs and symptoms, results of laboratory tests and radiological imaging) were investigated. Computer tomography (CT) or magnetic resonance (MR) were performed in the study group.

Results In the group A first CT examination revealed abnormalities in 9.7% of patients, in the group B - in 28% of children. MR examination showed pathological brain area in 79.3% of patients in group B. High signal in SE/T2 was observed in 95.7% and in FLAIR in 86.9%. In 90% of analyzed group B the disturbances in DWI were noted.

Conclusions CT examination preformed in the initial stadium of meningitis and/or encephalitis has limited diagnostic value for recognizing of inflammation. The characteristic of the abnormalities revealed by MR enables to recognize inflammation changes in central nervous system and their localization can direct diagnostic process. The presence of brain tissue alterations in MR image has significant correlation with clinical symptoms like seizures, consciousness disturbances and neurological deficits. The most sensitive sequences in estimation of the inflammation activity process are DWI and FLAIR.

References
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Background and Aims Placebo effect has been largely studied and debated in medicine. Interestingly the majority of studies focused on children and adults but not on newborns. In the field of osteopathic medicine, few studies documented this effect using sham therapy. A previous study showed the association between OMT and LOS on newborns. However, no research were conducted on the placebo effect on newborns osteopathically treated. Therefore the aim of this study is to detect the association between placebo treatment and change in clinical outcome in newborns.

Methods A double blinded randomized control trial was carried out on 250 preterm newborns, GA >29 and <37w and free of medical complications. After enrollment, all subjects were randomly assigned to study (N=107) and control group (N=143). All preterms received routine pediatric care and osteopathic sham therapy was administered to the study group only for the entire period of hospitalization. Primary outcome was to evaluate the effectiveness of sham therapy in reducing LOS.

Results At entry, univariate statistical analysis showed no differences between groups. At the end of the study, after adjusting for all potential confounders, generalized linear model analysis showed no difference on the primary outcome (mean difference between study and control group: 2.444; 95%CI –0.447, 5.337; p=0.09).