УДК 61:615.1(06)
ББК 52.82
А 43
ISBN 978-985-21-1398-4

С. Мазхар, Н.К. Джха

КЛИНИЧЕСКИЕ ПРОЯВЛЕНИЯ ЮВЕНИЛЬНОГО ИДИОПАТИЧЕСКОГО АРТРИТА

Научный руководитель: канд. мед. наук А.В. Крылова-Олефиренко
1-я кафедра детских болезней
Белорусский государственный медицинский университет, г. Минск

S. Mazhar, N.K. Jha

CLINICAL MANIFESTATIONS OF JUVENILE IDIOPATHIC ARTHRITIS

Tutor: PhD A.V. Krylova-Alefirenko
1st Department of Paediatrics
Belarusian State Medical University, Minsk

Резюме. В статье освещены проявления различных вариантов ювенильного идиопатического артрита у 57 детей, госпитализированных в 2021 году во 2-ю Городскую детскую клиническую больницу г. Минска. Проанализированы жалобы, клинические параметры, такие как возраст начала заболевания, распределение пациентов по полу и возрасту, характер суставного синдрома и объем пораженння, лабораторные данные, осложнения и дечение в зависимости от диагностированного варианта.

Ключевые слова: ювенильный идиопатический артрит, антинуклеарные антитела.

Resume. This article highlights the clinical and laboratory manifestations of different variants of Juvenile idiopathic arthritis in 57 children hospitalised for year 2021 in 2nd City Paediatric Clinical hospital, Minsk. In this study, multiple parameters like age of onset of disease, sex distribution of disease, clinical and laboratory signs, complications, treatment and their relation with different variants of JIA were analysed by using medical cards of the patient.

Key words: juvenile idiopathic arthritis, anti-nuclear antibody.

Actuality. Juvenile idiopathic arthritis (JIA) is a heterogeneous group of idiopathic inflammatory arthritis affecting children younger than 16 years of age and lasting six weeks or longer. While the exact causes of JIA are unknown, it begins when the immune system becomes overactive in a genetically susceptible person due to various triggers, like infections, vaccinations and others [1]. There are multiple types of JIA, each with distinct features. Generally, they all share arthritic symptoms of joint pain, swelling, warmth, and stiffness that last at least 6 weeks [1, 2]. The goal of treatment in JIA is to reduce the exacerbations as it is a lifelong disease, cannot be cured completely. Most children with JIA need a combination of medicines and a healthy lifestyle, including a balanced diet and exercise, to reach this goal. The specific treatment plan depends on the child's age, the type of JIA, and on other factors, such as disease severity [2].

Aim: to determine clinical and laboratory manifestations of different variants of JIA.

Objectives:

1. To analyse medical records to find out the most typical clinical and laboratory signs of JIA

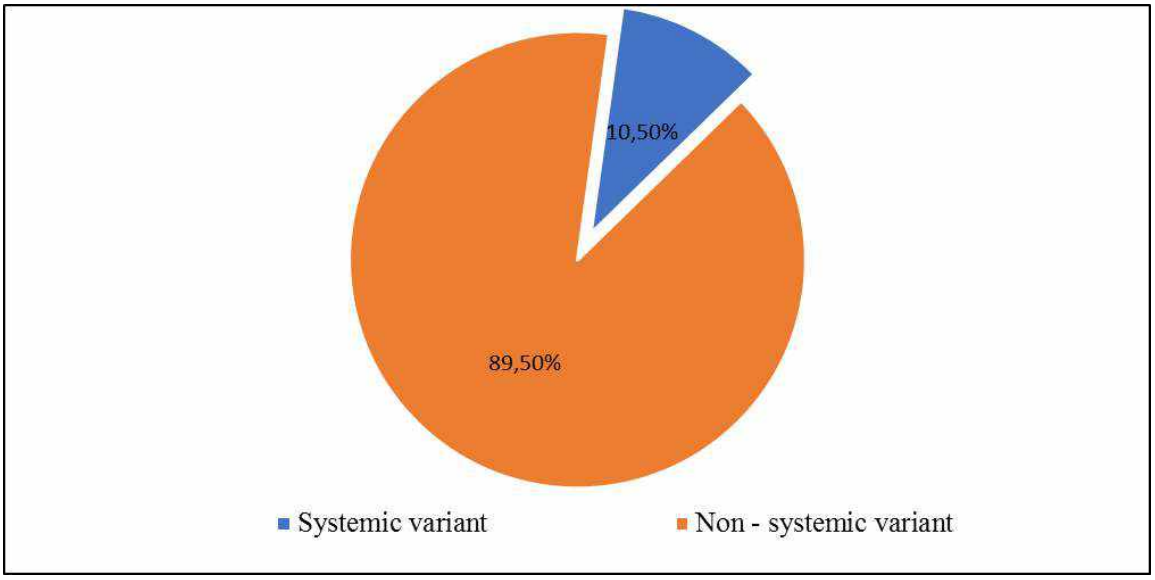
2. To characterise age and gender distribution, family history and serology testing results in children with JIA and to determine their relation with various types of JIA.

УДК 61:615.1(06)
ББК 52.82
А 43
ISBN 978-985-21-1398-4

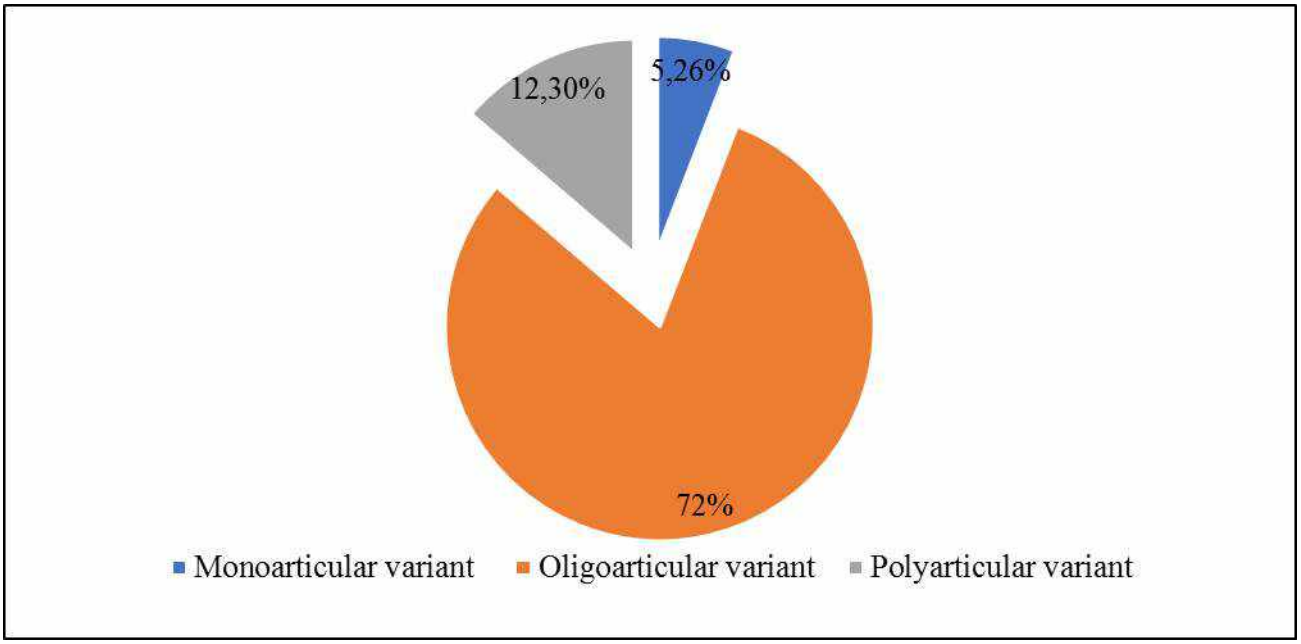
3. To assess a significance of differences in clinical signs, complications and treatment of the disease among different variants.

Materials and methods. We run the retrospective analysis of medical records of 57 patients hospitalized in 2nd city paediatric clinical hospital, Minsk, with a diagnosis of JIA for the year 2021. Statistical analysis was performed using the SPSS Statistics 17.0 software. All values are presented as median ± SD.

Cohort of JIA patients in our study had M:F ratio 18:39. Children studied aged between 3-18 years with median age of 12 ± 3.9 years. There were 6 patients with systemic variant and 51 patient non-systemic/articular variant of JIA. Non-systemic/articular variant included 3 patients with monoarticular variant, 41 patients with oligoarticular variant and 7 patients with more than five joints affected (polyarticular variant) (diagrams 1 and 2).



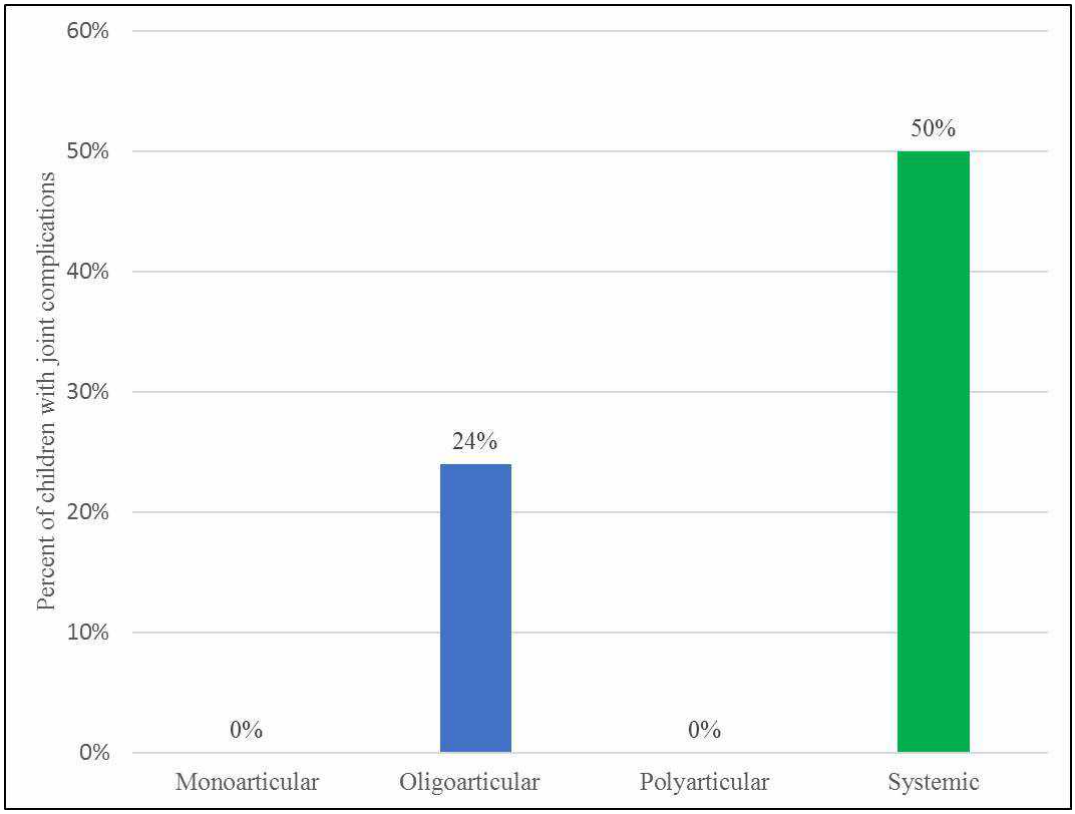
Diagr. 1 – Distribution of patients among systemic and non-systemic variants of JIA



Diagr. 2 – Distribution of patients with articular variants of JIA

УДК 61:615.1(06)
ББК 52.82
А 43
ISBN 978-985-21-1398-4

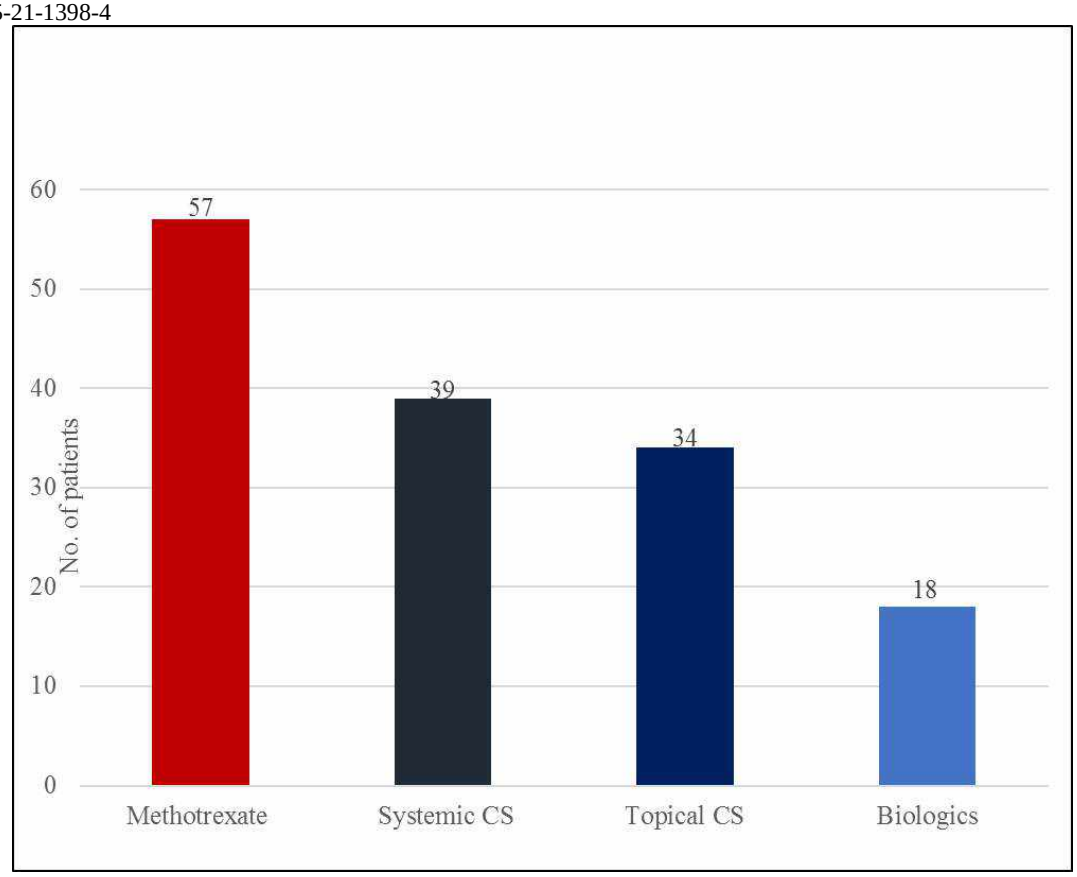
Results and their discussions. The age of onset of JIA varied from 7 months to 13 years with median age being 3±3 years. 6 out of all patients (12 %) had a family history of joint disease but we failed to find any statistically significant relation with disease severity. In serology, 31% of JIA patients were Anti-nuclear antibody (ANA) positive and none were positive for anti-cyclic citrullinated peptide (Anti-CCP) and rheumatoid factor. 14% of children enrolled had eye involvement. The proportion of patients to develop eye involvement was highest in those having systemic-onset disease (50%). Among patients with oligoarthritis and polyarthritis 7% and 28% were diagnosed with uveitis respectively . 26% of patients developed complications and majority of them (67%) were seen in children who had onset of disease before 5 years of age. The prevalence of joint complications was highest in systemic variant (diagram 3).



Diagr. 3 – Prevalence of joint complications among different variants of JIA

There was a tendency found that duration of disease was less in children with non-systemic/articular variant with joint complications (contractures) compared to those without joint complications although not statistically significant (p=0.074). All patients received Methotrexate as a first-line treatment, 34 patients (60%) received at least one intraarticular injection of topical corticosteroids (CS) and 39 patients (68%) received systemic corticosteroids at least one course. Biologics were used in 18 patients (32%) out of 57 patients (diagram 4).

УДК 61:615.1(06)
ББК 52.82
А 43
ISBN 978-985-21-1398-4



Diagr. 4 – Number of patients receiving different medications

Statistical analysis didn't reveal differences in age of onset, seropositivity and laboratory data on onset between groups of patients with systemic and non-systemic variants of JIA. We found that children with systemic variant of JIA had higher prevalence of eye involvement (3/6) and joint's complications (3/6) than in all other groups.

Conclusions:

1. Articular variant was more common than systemic variant. Most common variant of juvenile idiopathic arthritis was oligoarticular variant (72%).
2. In our study females were affected more frequently than males (2:1).
3. Patients with systemic variant of disease had more severe course with presence of joint's complications and eye involvement in half of children in this group.
4. ANA was the only antibody that was found to be positive in children with JIA but the absence of any seropositivity does not rule out the diagnosis of JIA.
5. Methotrexate remains the drug of choice in all cases of JIA, irrespective of variant. Systemic corticosteroids are still frequently used in both systemic and non-systemic/artritic JIA (68% of all cases).

Literature

1. Thatayatikom A, Modica R, De Leucio A. Juvenile Idiopathic Arthritis. [Updated 2023 Jan 16]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554605/
2. Branch, N. S. C. a. O. (2023, April 3). Juvenile Idiopathic Arthritis (JIA). National Institute of Arthritis and Musculoskeletal and Skin Diseases. https://www.niams.nih.gov/health-topics/juvenile-arthritis/diagnosis-treatment-and-steps-to-take