EUROPEAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND MANAGEMENT STUDIES

VOLUME04 ISSUE04
DOI: https://doi.org/10.55640/eijmrms-04-04-02 Pages: 8-13

MEGAURETHIR IN CHILDREN: METHODS OF ENDOSCOPIC CORRECTION

Akhmedov Yusuf Maxmudovich
Professor, Department of Pediatric Surgery No. 2, Samarkand State Medical University, Samarkand, Uzbekistan

Mavlonov Nurbek Nizomovich
Resident, Department of Pediatric Surgery No. 2, Samarkand State Medical University, Samarkand, Uzbekistan

Turayev Sukhrob Ortikovich
Resident, Department of Pediatric Surgery No. 2, Samarkand State Medical University, Samarkand, Uzbekistan

Mukhsinov Sardorbek Uktamovich
Resident, Department of Pediatric Surgery No. 2, Samarkand State Medical University, Samarkand, Uzbekistan

ABOUT ARTICLE

Key words: Megaureter, endoscopic correction, refluxing megaureter, obstructive megaureter (OMU), ureteral expansion coefficient (UEC).

Received: 30.03.2024
Accepted: 04.09.2024
Published: 09.04.2024

Abstract: Megaureter is a severe pathology of the urinary system. According to the World Health Organization, according to the number and structure of diseases, malformations of the urinary system organs in children occupy one of the leading places among pathologies of all organs and systems. The purpose of the study was to determine the effectiveness of endoscopic methods for correcting megaurethritis in children. The study presents the results of treatment of 116 patients with refluxing and obstructive megaureter on the basis of the Department of Pediatric Surgery No. 2 Samara State Medical University for the period from 2010 to 2022. The results of the examination revealed that the urodynamic characteristics of positive results after endoscopic correction of megaureter in a period of 3-6 months indicated a clear depending on the treatment results from the method of forming a bolus in the area of the ureterovesical segment: for mild severity, the STING method was

effective, for moderate severity - HITI, and for severe severity - HITII.

INTRODUCTION

Megaureter is a severe pathology of the urinary system. According to the World Health Organization, according to the number and structure of diseases, malformations of the urinary system organs in children occupy one of the leading places among pathologies of all organs and systems. Megaureter accounts for up to 40% of diseases in this group according to information from various authors.

Kazakh colleagues also confirm that today one of the pressing problems of pediatric urology is the issues of adequate surgical treatment of complex congenital megaureters, such as complete duplication of the affected kidney with ureterocele [9]. These authors also indicated that the modified method of surgical treatment of double megaureter in children has positive characteristics and is an equally safe and effective alternative to en bloc ureterocystoneostomy.

The problem lies in the complexity of differential diagnosis of the causes leading to pronounced dilatation of the upper urinary tract and progressive renal failure, and the complexity of choosing treatment tactics [2, 3, 5]. There are no objective criteria to assess the degree of dilatation of the upper urinary tract before and after treatment [6, 7]. The results of treatment, and ultimately the prognosis, are determined by the degree of damage to the urinary system at various stages of intrauterine and early postnatal development and the time when the patient first consults a doctor and this defect is detected.

In newborns and infants with megaureter, urological symptoms are not expressed, and therefore this malformation is often recognized in the absence of ultrasound screening in the later stages, when infection occurs and the picture of acute pyelonephritis predominates in combination with general symptoms of intoxication.

Subsequently, the kidney dies, and organ-preserving surgery becomes impossible [3].

An analysis of the results of reconstructive plastic surgery for primary obstructive megaureter (POM) in children showed that unsatisfactory results reach up to 18%. In young children (1-3 years), POM does not require surgical treatment, and dilatation of the ureter disappears without a trace over time, the cause of which is explained by the immaturity of the ureterovesical segment (UVS). However, the

timing of the disappearance of POM is quite variable and can last from 1 to 3 years. It is quite obvious that disturbances in the passage of urine for such a long time do not go away without leaving a trace for the kidneys.

Purpose of the study. To determine the effectiveness of endoscopic methods for correcting megaurethritis in children in the city of Samarkand.

METHODS

The study presents the results of treatment of 116 patients with refluxing and obstructive megaureter at the Department of Pediatric Surgery No. 2 of Samarkand State Medical University for the period from 2010 to 2022.

Patients underwent general clinical and all urological examinations. All patients were divided into 2 groups according to the nature of the disease: group 1 – 61 patients with refluxing, group 2 – 55 patients with obstructive form of megaureter. Due to the exacerbation of POM, the presence of chronic renal failure, malnutrition and anemia in 25 children, surgical treatment was delayed until the condition stabilized. Endoscopic treatment methods were used in 29 patients with refluxing megaurethritis.

To assess the degree of expansion of the ureter before treatment and after treatment, we calculated the coefficient of expansion of the ureter (CEU) using our method: for this purpose, we calculated the ratio of the diameter of the ureter in its various parts (upper, middle and lower thirds) to the width of the corresponding vertebral bodies (L3, L5). The diameter of the ureter was measured standardly at points - the upper third at the level of the lower edge of the third lumbar vertebra, the middle third at the level of the lower edge of the fifth lumbar vertebra, and the distal third of the ureter was measured at the level of the upper edge of the acetabulum. CEU is calculated using the following formula:

$$CEU = D/L,$$

where D is the width of the ureter, and L is the width of the body of the corresponding vertebra. In children, regardless of age, the CEU normally did not exceed 0.07.

RESULTS

At the first stage, cystoscopy was performed, and first of all, the condition of the mucous and submucosal layers of the bladder, the shape and location of the orifices were assessed, the length of the submucosal section of the ureters was calibrated and the degree of hydrodilatation was determined.

Then, in the second stage, we proceeded directly to the endoscopic correction of reflux, for this we used special injection needles on flexible tubular nylon guides and biopolymer material (Dam Plus, AquaTouch Jelly). When treating patients with endoscopic treatment methods, 3 methods were used:

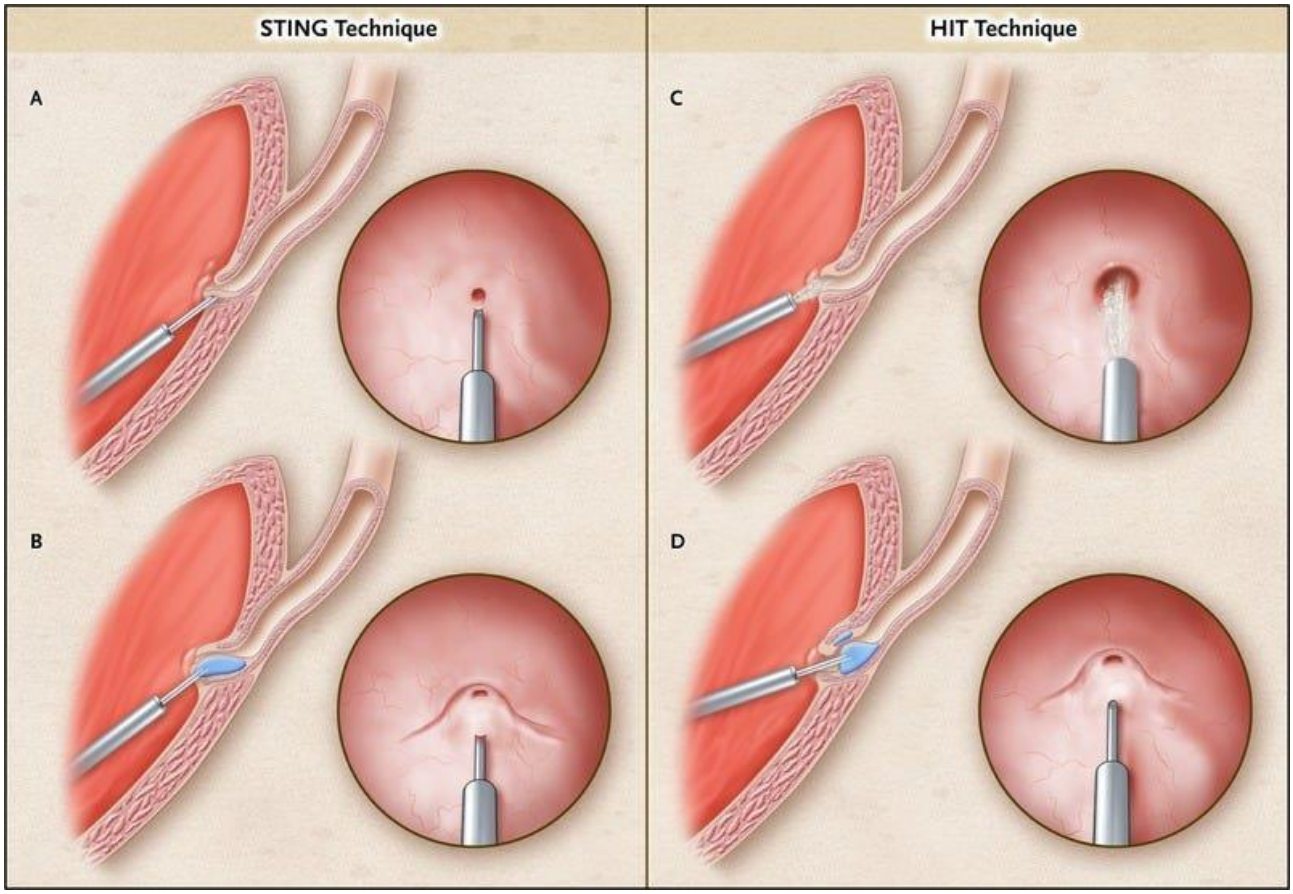

Figure 1. methods used in the study

At the initial stages of the study, the STING method was used for all degrees of megaureter severity, which, as experience has shown, does not always provide a positive result, especially in moderate and severe VUR. Subsequently, for moderate and severe degrees of megaureter, endoscopic correction was carried out using the HITI and HITII methods.

CONCLUSION

The results of the examination revealed that the urodynamic characteristics of positive results after endoscopic correction of MG in a period of 3-6 months indicated a clear dependence of the treatment results on the method of bolus formation in the ureterovesical segment: with mild severity, the STING method was effective, with moderate severity - HITI and in severe cases - HITII.

REFERENCES

1. Aiello G. et al. Efficacy and safety of high-pressure balloon dilatation for primary obstructive megaureter in children: a systematic review //Frontiers in Urology. – 2022. – Т. 2. – С. 1042689.
2. Hamid R. et al. Primary obstructive megaureter in children; 10 years' experience from a tertiary care center //Urology Annals. – 2022. – Т. 14. – №. 3. – С. 252-258.
3. Khudoyarova D., Shodiklova G., Yunusova Z. RELEVANCE OF THE PROBLEM OF CONNECTIVE TISSUE DYSPLASIA IN OBSTETRICS //Естественные науки в современном мире: теоретические и практические исследования. – 2024. – Т. 3. – №. 1. – С. 13-16.
4. Ripatti L. et al. High-pressure balloon dilatation of primary obstructive megaureter in children: a systematic review //BMC urology. – 2023. – Т. 23. – №. 1. – С. 30.
5. Svekatun V., Dmitryakov V. Treatment of primary obstructive megaureter in children using minimally invasive technologies //Pedagogy and Psychology of Sport. – 2020. – Т. 6. – №. 2. – С. 113-121.
6. Święton D. et al. The emerging role of MR urography in imaging megaureters in children //Frontiers in Pediatrics. – 2022. – Т. 10. – С. 839128.
7. Uralov S. et al. IMMUNOLOGICAL INDICATORS IN STENOSING LARINGOTRACHEITIS IN CHILDREN //Science and innovation. – 2024. – Т. 3. – №. D1. – С. 81-86.
8. Ахмедов Ю. М. и др. КОРРЕКЦИЯ ВРОЖДЕННОГО МЕГАУРЕТЕРА У ДЕТЕЙ //Детская хирургия. – 2020. – Т. 24. – №. S1. – С. 18-18.
9. Аязбеков Е.А., Абекенов Б.Д.2 Абдибеков М.И., Бишманов Р.К. МЕТОД УРЕТЕРОЦИСТОНЕОСТОМИИ С УРЕТЕРОЦЕЛЕ У ДЕТЕЙ. – 2024.
10. Айнакулов А.Д., Зоркин С.Н. Диагностика и лечение обструктивных уропатий у детей // Гематология и трансфузиология. - 2012. - № 6. - С. 23-26.
11. Айнакулов А.Д., Майлыбаев Б.М. Дифференциальный подход к лечению первичного обструктивного мегауретера у детей // Детская хирургия. - 2014. -№ 5. - С. 16-22.
12. Врублевский А.С., Врублевская Е.Н., Врублев-ский С.Г. Опыт стентирования мочеточников при мегауретере у детей // Детская урология. - М., 2016. - С. 43.
13. Дубров В. И., Каганцов И. М. Сравнение результатов внутрипузырной и внепузырной реимплантации мочеточника при двустороннем рефлюксирующем мегауретере у детей //Вестник урологии. – 2020. – Т. 8. – №. 2. – С. 21-28.
14. Ибодов Х. И., Мираков Х. М. ДИАГНОСТИКА НАРУШЕНИЙ УРОДИНАМИКИ У ДЕТЕЙ С НЕРЕФЛЮКСИРУЮЩИМ МЕГАУРЕТЕРОМ (ОБЗОР ЛИТЕРАТУРЫ) //Вестник педагогического университета (Естественных наук). – 2022. – №. 4 (16). – С. 295-301.

15. Зоркин С. Н. и др. Эффективность баллонной дилатации высокого давления при первичном обструктивном мегауретере у детей раннего возраста //Педиатрия им. ГН Сперанского, 2022; 101 (6). С. 22. – 2022. – Т. 29.

16. Лолаева Б. М., Джелиев И. Ш. Результаты консервативного, эндоскопического, хирургического методов лечения обструктивного мегауретера у детей раннего возраста //Вестник Волгоградского государственного медицинского университета. – 2020. – №. 1 (73). – С. 169-172.

17. Рахматуллаев А. и др. Эндоскопическое лечение первичного обструктивного мегауретера у детей //Первая международная конференция общества детских урологов Узбекистана. – 2024. – Т. 1. – №. 1. – С. 40-40.

18. Худоярова Д. Р., Турсунов Н. Б. «ОСТРЫЙ ЖИВОТ» В ГИНЕКОЛОГИИ: СОВРЕМЕННЫЕ ВОЗМОЖНОСТИ.

19. Соловьев А. Е. Мегауретер у новорожденных и детей раннего возраста. – 2021.

20. Сабирзянова З. Р., Павлов А. Ю. РЕЗУЛЬТАТЫ ЛЕЧЕНИЯ ОБСТРУКТИВНОГО МЕГАУРЕТЕРА У ДЕТЕЙ В ОТДАЛЕННОМ КАТАМНЕЗЕ //РОССИЙСКИЙ ВЕСТНИК ДЕТСКОЙ ХИРУРГИИ, АНЕСТЕЗИОЛОГИИ И РЕАНИМАТОЛОГИИ Учредители: Российский национальный исследовательский медицинский университет им. НИ Пирогова, Российская ассоциация детских хирургов, ООО" Эко-Вектор". – 2022. – Т. 12. – С. 121.

21. Шопулотов Ш. и др. ЛЕЧЕНИЯ НЕДЕРЖАНИЯ МОЧИ //Естественные науки в современном мире: теоретические и практические исследования. – 2024. – Т. 3. – №. 1. – С. 4-8.

22. Шопулотов Ш. и др. ГЕСТАЦИОННЫЙ ПИЕЛОНЕФРИТ //Центральноазиатский журнал образования и инноваций. – 2024. – Т. 3. – №. 1 Part 2. – С. 61-65.

23. Шопулотов Ш. и др. СТРУКТУРА ЭТИОЛОГИЧЕСКИХ ПРИЧИН ГИПЕРАКТИВНОГО МОЧЕВОГО ПУЗЫРЯ //Центральноазиатский журнал образования и инноваций. – 2024. – Т. 3. – №. 1 Part 2. – С. 56-60.