

IRRIGATION SOLUTIONS IN CLINICAL ENDODONTICS: TYPES, PROPERTIES, AND ACTIVATION MECHANISMS

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Abstract.

Whooping cough remains one of the leading causes of infant mortality worldwide. This article presents a comparative diagnosis of bronchopulmonary complications in young children infected with respiratory syncytial virus and pertussis virus. The study was conducted on 50 children with pertussis at the central polyclinic of Termez city, Surkhandarya region, during 2023-2024. All 50 children with whooping cough were divided into age groups as follows: 1-year-old children formed the 1st group, 2-year-old children formed the 2nd group, and 3-year-old children formed the 3rd group. When examining the disease by gender in the study: Bronchopulmonary complications in boys were categorized into subgroups based on the results of objective and instrumental examinations and were assessed as follows: Bronchopneumonia in 18 (36%) patients, acute bronchitis in 16 (32%) patients, laryngitis in 6 (12%) patients, and bronchitis+laryngitis in 9 (18%) patients. In girls, bronchopulmonary complications were studied by subgroups as follows: bronchopneumonia was observed in 6 (12%) patients, acute bronchitis in 16 (32%) patients, laryngitis in 15 (30%) patients, and bronchitis+laryngitis in 13 (26%) patients. In conclusion, among the bronchopulmonary complications in children with whooping cough, bronchopneumonia was observed in 38% of boys, while acute bronchitis was seen in 32% of girls. It was found that 30% of all examined patients were not vaccinated at all, of which 10% had not yet reached the age for vaccination. Whooping cough tends to be severe in children, mainly in early childhood (1-3 years old), due to incomplete vaccination against the disease. These cases require a special therapeutic approach.

Key words: whooping cough, respiratory syncytial virus, young children, bronchopneumonia, acute bronchitis, laryngitis, vaccination calendar, disease.

Muammoning dolzarbligi: Ko'kyo'tal kasalligi butun dunyoda ko'krak yoshidagi bolalar orasida o'lim holatlarining asosiy sababchilaridan bo'lib qolmoqda [1-2]. Rivojlangan mamlakatlarda ko'kyo'tal bilan kasallangan bolalarda bronxopnevmoniya asorati taxminan 6% hollarda uchrasa, ko'krak yoshidagi va 6 oygacha bo'lgan bolalarda esa bu asorat darajasi 4 barobar ko'p kuzatiladi [3-4-5].

Ko'kyo'tal infeksiyasi yangi tug'ilgan chaqaloqlar va hayotining birinchi oylaridagi bolalar uchun eng xavfli hisoblanadi [6-7], agar ular onaning seronegativligi tufayli transplatsentar ona antitanachalarini olmagan bo'lsa.

Erta yoshdagi bolalarda, shu jumladan hayotining birinchi yilida og'ir, silliq bo'lmagan kechish va salbiy oqibat xavfi bo'lgan eng keng tarqalgan yuqumli kasalliklar ko'kyo'tal va respirator-sinsitial virusli infeksiya (RS-infeksiya) bo'lib, ko'pincha ko'kyo'talga o'xshash sindrom bilan kechadi. Rivojlanayotgan mamlakatlarda erta yoshdagi bolalar orasida ko'kyo'tal infeksiyasidan o'lim 23% ga yetadi [1].

So'nggi 10-yil ichida rivojlangan mamlakatlarda bolalarni emlash bilan butunlay qamrab olish yuqori bo'lishiga qaramay, ko'kyo'tal bilan kasallanish vaqti-vaqti bilan ko'tarilish va o'lim holatlari uchrashligi saqlanib qolgan. AQShda so'nggi 60-yil ichida ko'kyo'tal bilan kasallanishning eng yuqori darajasi 2012-yilda qayd etilgan (48 277 ta kasallik holati, ulardan 20 tasi o'lim bilan tugagan) [8].

Fransiyada ko'kyo'tal hayotning dastlabki uch oyidagi bolalarda o'lim ko'rsatkichlari bo'yicha bakterial infeksiyalar orasida yetakchilik qilgan [9].

Respirator-sinsitial virus va ko'kyo'tal bilan kasallanish erta yoshdagi bolalarda, ayniqsa ikki yoshgacha bo'lgan bolalarda bronxit, bronxiolit va pnevmoniyaning isbotlangan asosiy etiologik sababidir [10].

Respirator-sinsitial virus (RSV) etiologiyali pnevmoniya rivojlanayotgan mamlakatlarda bezgakdan keyin bolalar o'limining ikkinchi eng ko'p uchraydigan sababchisidir [11].

300 dan ortiq olib borilgan tadqiqotlar tahliliga ko'ra, 2015-yilda RS-infeksiya (RS-infeksiya; Respirator-sinsitial virus) 3,2 million bemorlarni kasalxonaga yotqizishga va dastlabki besh yil ichida 118 000 bolaning o'limiga sabab bo'ldi [12].

Respirator-sinsitial virusning klinik ko'rinishlari yoshga ham bog'liq bo'ladi: 1 yoshgacha bo'lgan bolalarda 63% hollarda obstruktiv bronxit va 12% da bronxiolit holatlar qayd etilgan. 2 yoshdan 5 yoshgacha ko'kyo'tal kasalliklarida asosan pnevmoniya kuzatiladi [13].

Shuni ta'kidlash kerakki Pulmonologlar, aynan respirator-sinsitial virus va rinoviruslar bronxial astma rivojlanishining qo'zg'atuvchilari deb hisoblaydilar, rekonvalessentlar ko'kyo'tal kasalligi shakllanishi mumkin. Bunda bronxlarning giperreaktivligi, yo'talning uzoq vaqt saqlanib qolishiga yordam beradi va keyinchalik davom etishini talab qiladi [14].

Shu boisdan Respirator-sinsitial virus va ko'kyo'tal kasalligida mavjud bo'lgan morfofunktsional o'zgarishlar va uning asoratlari: bronxit, bronxiolit, pnevmoniya va uning korreksiya qilishda yangicha yondoshuv hamda bolalarning jismoniy rivojlanishini ko'rsatib beruvchi nafas yo'llari o'tkazuvchanligi ko'rsatkichlarni kompleks o'rganish mavzuning dolzarbligini ko'rsatmoqda.

Tadqiqot maqsadi: Respirator-sinsitial virus va ko'kyo'tal bilan kasallangan erta yosh bolalarda bronx-o'pka asoratlari solishtirma tashxisotini baholashdan iborat.

Tekshirish usullari va materiallari: Tadqiqot Surxondaryo viloyati Termiz shahar markaziy poliklinikasida 2023-2024 yillar mobaynida ko'kyo'tal bilan kasallangan Erta bolalik (1-3 yosh) bo'lgan 50 nafar bolalarda retrospektiv tahlil asosida o'tkazildi. Tadqiqotda bemor shikoyatlari, epidemiologik anamnez ma'lumotlari, hayot anamnezi, kasallikning rivojlanish tarixi va laborator – instrumental (umumiy qon tahlili va rentgenologik) tekshiruvlar asos qilib olindi. Barcha 50 nafar ko'kyo'tal bilan kasallangan bolalar yoshi bo'yicha taqsimlashda quyidagi guruhlar asos qilib olindi. 1 yosh bolalar 1- guruhni, 2 yosh bolalar 2- guruhni, 3 yosh bolalar 3- guruhni tashkil qildi.

1-jadval

Guruhlarda bemor bolalarning yoshi haqida ma'lumot

Yoshi	Qiz bolalar N=20		O'g'ilbolalar N=30		Jami N=50	
	M	%	M	%	M	%
1 yosh	9	18	11	22	20	40
2 yosh	7	14	13	26	20	40
3 yosh	4	8	6	12	10	20

Tadqiqot natijalari: Ko'kyo'talning asoratlari, odatda, kasallikning og'ir shakllari bilan kasallangan bolalarda rivojlandi.

Kasallikning o'z vaqtida aniqlanishi, to'g'ri davolash, bemorning yoshi, kasallikning og'irlik darajasi va yondosh kasalliklarning mavjudligi ko'kyo'tal kechishiga ta'sir ko'rsatadi. Kasallikdan so'ng bir umrlik turg'un immunitet shakllanadi.

Kuzatuvga olgan bemorlarimizda ko'kyo'tal kasalligi bolalarda mavjud kalendar bo'yicha ko'kyo'talga qarshi emlanganlik darajasini o'rgangimizda.

2-jadval

Bemorlarda bronx- o'pka asoratlari bilan asoratlangan ko'kyo'talli bolalarda jins buyicha emlanganlik darajasi taqsimlanishi

Belgilari	Qiz bolalar N=20		O'g'il bolalar N=30	
	Abs.	%	Abs.	%
Emlanmagan	6	12	9	18
AKDS-1	13	26	18	36
AKDS-2	15	30	22	44

AKDS-3	6	12	9	18
Emlash oraliqlarining buzilishi bo'lganlar	9	18	14	28

Kuzatuvimizda bo'lgan O'g'il bolalarda bronx-o'pka asoratlari o'z navbatida onasining so'zidan bemor shikoyatlari, kasallik klinik belgilari, obektiv va instrumental tekshiruv natijalari asosida kichik guruxlarga bo'lingi va quyidagicha o'rganildi: bronxopnevmoniya 18 nafar (36%) bemorlarda, o'tkir bronxit 16 nafar (32%) bemorlarda, laringit 6 nafar (12%) va bronxit+laringit 9 nafar (18%);

Qiz bolalarda esa bronx-o'pka asoratlari kichik guruhlarga bo'lib o'rganilganda quyidagicha: bronxopnevmoniya 6 nafar (12%) bemorlarda, o'tkir bronxit 16 nafar (32%) bemorlarda, laringit 15 nafar (30%) va bronxit+laringit 13 nafar (26%) bemorlarda kuzatildi.

3-jadval

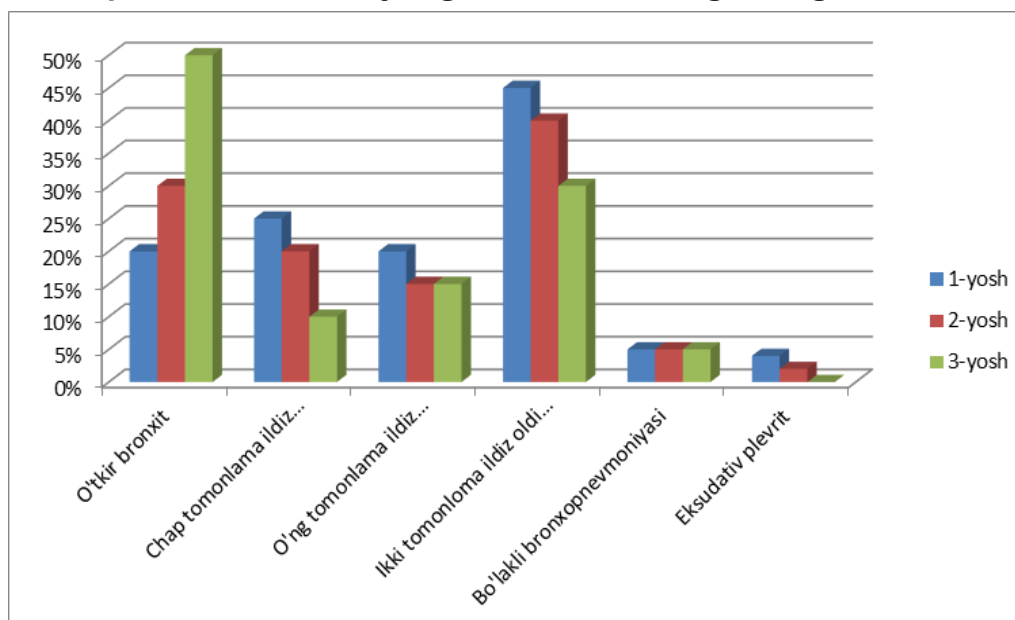
Guruhlarda bemor bolalarning yoshi haqida ma'lumot

Belgilari	1 yosh N=20		2 yosh N=20		3 yosh N=10	Jami N=50	Jami N=50	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Bronxopnevmoniya	9	45	8	40	3	30	20	40
O'tkir bronxit	4	20	6	30	5	50	15	30
Laringit	2	10	2	10	0	0	4	8
Bronxit+laringit	5	25	4	20	2	20	11	22

Ushbu ko'k'yo'tal bo'lgan bolalarda instrumental tekshiruvlardan ko'krak qafasi rentgenografiyasi o'tkazganida o'pkadagi rentgenologik o'zgarishlar (o'pka ildizini simmetrik kengayishi, o'pka soyasi tinikligini oshishi, ateletkz) 40% bemor bolalarda pnevmoniya ko'rsatdi.

1-diagramma

Bronx- o'pka asoratlari rivojlangan bolalarda rengenologik ko'rsatkichlar



Xulosa: Ko'k'yo'tal bilan kasallangan bolalarda bronx-o'pka asoratlardan, bronxopnevmoniya O'g'ilbolalarda 38% va Qiz bolalarda esa o'tkir bronxit 32% tekshiruvdagi bemorlarning 30% umuman emlanmagan, shulardan 10% emlash yoshiga etmaganligi aniqlandi. Asosan erta bolalik (1-3 yosh) davrida bo'lgan bolalarda ko'k'yo'talga qarshi emlash to'liq tugallanmaganligi sababli ko'k'yo'tal kasalligi og'ir kechadi, ularga alohida terapevtik yondoshish talab etiladi.

List of references

[1] Pramono R.X., S.A. Imtiaz, E. Rodriguez-Villegas. A cough-based algorithm for automatic diagnosis of pertussis. PLoS One. 2016; 11 (9): e0162128.

- [2] Cherry, J. D., & R. M. H. Harrison. (2019). Whooping Cough: Epidemiology, Diagnosis, and Treatment. *Clinical Infectious Diseases*, 68(3), 472-478.
- [3] Wang, X., & R. L. Jones. (2020). Pertussis in Adolescents and Adults: Current Perspectives. *Journal of Infection and Public Health*, 13(6), 979-986. 2019.06.001.
- [4] Gordis, L., & E. L. Shaw. (2021). Management of Whooping Cough. *Pediatric Clinics of North America*, 68(4), 725-738. 2021.03.005.
- [5] Crawford, S., & L. P. Johnson. (2018). The Role of Vaccination in Preventing Pertussis. *Vaccine*, 36(41), 6119-6125. 2018.07.066.
- [6] Петрова, М.С. Коклюш у детей раннего возраста / М.С. Петрова [и др.] // Эпидемиология и инфекционные болезни. – 2012. – № 6. – С. 19–24. DOI: 10.17816/EID40704.
- [7] Paddock CD, Sanden GN, Cherry JD, et al. Pathology and pathogenesis of fatal *Bordetella pertussis* infection in infants. // *Clin Infect Dis*. 2008 Aug;47(3):328-38. DOI:10.1086/589753.
- [8] Cohen S., A. Black, A. Ross [et al.] Updated treatment and prevention guidelines for pertussis. *JAAPA*. 2014; 27(1): P. 19—25.
- [9] Guillot S., G. Descours, Y. Gillet [et al.] Macrolide-resistant *Bordetella pertussis* infection in newborn girl, France. *Emerg. Infect. Dis*. 2012; 18 (6): 966—968.
- [10] Бабаченко И.В., О.В. Самодова, В.А. Анохин. Клинико-эпидемиологические особенности респираторно-синцитиальной вирусной инфекции у детей первого года жизни. *Журнал инфектологии*. 2018; 10(3): 70 —76.
- [11] Perk Y., Özdil M. Respiratory syncytial virüs infections in neonates and infants. *Turk Pediatri Ars*. 2018; 53(2): 63—70.
- [12] Shi T., McAllister D.A., O'Brien K.L., et al. Global, regional, and national disease burden estimates of acute lower respiratory infections due to respiratory syncytial virus in young children in 2015: a systematic review and modelling study. *Lancet*. 2017; 390: 946—58.
- [13] Ровный В.Б., Ю.В. Лобзин, И.В. Бабаченко [и др.]. Клинико-эпидемиологические особенности респираторно-синцитиальной инфекции у детей разного возраста. *Журнал инфектологии*. 2013; 5(2): 76—81.
- [14] Нестерова Ю.В. Клинико-лабораторные особенности коклюша у детей в современных условиях: Автореф. дисс. ... к.м.н. СПб, 2021: 22.