

EARLY ANTIBIOTIC THERAPY, INTESTINAL DYSBIOSIS AND IMMUNOLOGICAL CHANGES IN NEWBORNS

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Abstract

This article discusses the effects of early antibiotic therapy on intestinal microbiota, the mechanisms of dysbiosis development, and immunological changes in newborns. In the neonatal period, inappropriate or prolonged use of antibiotics may lead to a reduction in beneficial intestinal microorganisms, increased susceptibility to pathogenic flora, and impairment of immune responses. Disruption of intestinal microbiota can increase the risk of allergic diseases, metabolic disorders, necrotizing enterocolitis, and infectious diseases in infants. The article also provides information on the rational use of antibiotic therapy, the importance of probiotics, and preventive measures based on modern scientific data. The neonatal period is one of the most critical stages of human development, during which the intestinal microbiota and immune system undergo active formation. Early antibiotic therapy is widely used in neonatal medicine for the prevention and treatment of severe bacterial infections. However, irrational or prolonged antibiotic use may negatively affect the developing intestinal microflora, leading to intestinal dysbiosis and immunological disturbances. This article discusses the impact of early antibiotic therapy on neonatal intestinal microbiota, the mechanisms of dysbiosis development, associated immune changes, and possible long-term health consequences. Modern preventive approaches, including rational antibiotic use, breastfeeding, and probiotic support, are also highlighted.

Keywords

Antibiotic therapy, newborn, intestinal dysbiosis, microbiota, immunological changes, neonatology, probiotics, dysbacteriosis, immunity, neonatal infection.

CHAQALOQLARDA ERTA ANTIBIYOTIKOTERAPIYA, ICHAK DISBIOZI VA IMMUNOLOGIK O'ZGARISHLAR

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Annotatsiya

Ushbu maqolada chaqaloqlarda erta antibiyotikoterapiyaning ichak mikrobiotasiga ta'siri, disbioz rivojlanish mexanizmlari hamda immun tizimdagi o'zgarishlar yoritilgan. Neonatal davrda antibiotiklarni noo'rin yoki uzoq muddat qo'llash foydali ichak mikroorganizmlarining kamayishiga, patogen floraga moyillikning ortishiga va immun javobning buzilishiga olib keladi. Ichak mikrobiotasining buzilishi chaqaloqlarda allergik kasalliklar, metabolik buzilishlar, nekrotik enterokolit hamda infeksiyon kasalliklar xavfini oshirishi mumkin. Maqolada zamonaviy ilmiy

ma'lumotlar asosida antibiotikoterapiyani ratsional qo'llash, probiotiklarning ahamiyati va profilaktik choralar haqida ham ma'lumot berilgan

Chaqaloqlik davri inson rivojlanishining eng muhim bosqichlaridan biri bo'lib, aynan shu davrda ichak mikrobiotasi va immun tizim faol shakllanadi. Erta antibiotikoterapiya neonatal tibbiyotda og'ir bakterial infeksiyalarni oldini olish va davolashda keng qo'llaniladi. Biroq antibiotiklarni noo'rin yoki uzoq muddat qo'llash ichak normal mikroflorasining buzilishiga olib kelib, ichak disbiozi hamda immunologik o'zgarishlarni yuzaga keltirishi mumkin. Ushbu maqolada erta antibiotikoterapiyaning chaqaloqlar ichak mikrobiotasiga ta'siri, disbioz rivojlanish mexanizmlari, immun tizimdagi o'zgarishlar va uzoq muddatli salbiy oqibatlari yoritilgan. Shuningdek, antibiotiklardan oqilona foydalanish, ko'krak suti bilan oziqlantirish va probiotik qo'llash kabi zamonaviy profilaktik yondashuvlar ko'rib chiqilgan.

Kalit so'zlar

Antibiotikoterapiya, chaqaloq, ichak disbiozi, mikrobiota, immunologik o'zgarishlar, neonatologiya, probiotiklar, disbakterioz, immunitet, neonatal infeksiya.

Kirish

Chaqaloqlik davri organizmning eng nozik va muhim rivojlanish bosqichlaridan biri hisoblanadi. Aynan shu davrda ichak mikrobiotasi shakllanadi va immun tizimning yetilishi boshlanadi. So'nggi yillarda neonatal amaliyotda antibiotiklardan keng foydalanish kuzatilmoqda. Antibiotiklar bakterial infeksiyalarni davolashda muhim o'rin tutsa-da, ularni erta va nazoratsiz qo'llash chaqaloq organizmida bir qator salbiy oqibatlarni yuzaga chiqarishi mumkin.

Ichak mikrobiotasi inson salomatligida muhim ahamiyatga ega bo'lib, u immun tizim, moddalar almashinuvi va himoya mexanizmlarini boshqarishda ishtirok etadi. Antibiotiklar foydali bakteriyalarni ham yo'q qilishi natijasida ichak disbiozi rivojlanadi. Bu holat esa immunologik o'zgarishlarga sabab bo'ladi.

Asosiy qism

Erta antibiotikoterapiyaning ahamiyati va muammolari:

Neonatal davrda sepsis, pnevmoniya va boshqa infeksiyon kasalliklarni davolashda antibiotikoterapiya hayotiy zarurat hisoblanadi. Ayniqsa muddatidan oldin tug'ilgan chaqaloqlarda infeksiya xavfi yuqori bo'ladi. Shu sababli keng ta'sir doirasiga ega antibiotiklar ko'p qo'llanadi.

Biroq antibiotiklarni uzoq muddat yoki asossiz qo'llash ichak mikroflorasining buzilishiga olib keladi. Chaqaloqlarda mikrobiota hali to'liq shakllanmaganligi sababli antibiotiklarning salbiy ta'siri kattalarga nisbatan kuchliroq namoyon bo'ladi

Ichak disbiozining rivojlanish mexanizmi:

Ichak disbiozi — foydali va patogen mikroorganizmlar o'rtasidagi muvozanat buzilishi bilan tavsiflanadigan holatdir. Antibiotiklar ta'sirida bifidobakteriyalar va laktobakteriyalar soni kamayadi. Natijada shartli patogen flora ko'payishi uchun qulay muhit yuzaga keladi.

Disbioz quyidagi o'zgarishlarga sabab bo'ladi:

ichak shilliq qavatining himoya funksiyasi pasayadi;

- Ovqat hazm qilish buziladi;
- Vitaminlar sintezi kamayadi;
- Patogen bakteriyalar ko'payadi;
- Mahalliy immunitet susayadi.

Chaqaloqlarda bu holat diareya, meteorizm, vazn yetishmovchiligi va enterokolit bilan namoyon bo'lishi mumkin.

Immunologik o'zgarishlar

Ichak mikrobiotasi immun tizim bilan chambarchas bog'liq. Foydali bakteriyalar immun hujayralarning yetilishida va yallig'lanishga qarshi javob shakllanishida muhim rol o'ynaydi.

Antibiotikoterapiya natijasida:

- T-limfotsitlar faoliyati buziladi;
- Immunoglobulin A (IgA) ishlab chiqarilishi kamayadi;
- Yallig'lanish sitokinlari ortadi;
- Allergik reaksiyalarga moyillik kuchayadi.

Ba'zi tadqiqotlarga ko'ra, erta antibiotikoterapiya keyinchalik bronxial astma, atopik dermatit va semizlik rivojlanish xavfini oshirishi mumkin.

Profilaktika va zamonaviy yondashuvlar

Erta antibiotik terapiyaning salbiy oqibatlarini kamaytirish uchun antibiotiklarni faqat qat'iy ko'rsatmalar asosida qo'llash zarur. Davolash davomiyligi imkon qadar qisqa bo'lishi kerak.

Ko'krak suti foydali mikroorganizmlar o'sishini rag'batlantiradi va ichak mikrobiotasining tiklanishiga yordam beradi.

Xulosa

Chaqaloqlarda erta antibiotikoterapiya og'ir infeksiyalarni davolashda muhim ahamiyatga ega bo'lsa-da, uning noo'rin qo'llanishi ichak disbiozi va immunologik o'zgarishlarga olib kelishi mumkin. Ichak mikrobiotasining buzilishi chaqaloq salomatligiga uzoq muddatli salbiy ta'sir ko'rsatadi. Shu sababli antibiotiklarni oqilona qo'llash, probiotiklardan foydalanish va tabiiy ovqatlantirishni qo'llab-quvvatlash neonatal amaliyotning muhim yo'nalishlaridan biri hisoblanadi.

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