# OPTIMIZING THE TREATMENT OF CANDIDIASIS IN YOUNG CHILDREN

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**ABSTRACT:** This article examines the use of fluconazole in the treatment of candidiasis in young children. It discusses risk factors for the development of this disease, clinical features, methods of administration, dosage of the antifungal drug, and treatment with fluconazole.

**Key words:** young children, candidiasis, fluconazole.

Dental diseases are widespread in children in all countries of the world. Numerous factors contribute to the development of dental diseases: insufficient intake of fluorides, cariogenic bacteria from dental biofilm, frequent consumption of easily digestible carbohydrates, etc. [2]. Many authors report an increase in the dental morbidity of children, and untreated carious lesions of temporary teeth occupy the 10th place among all chronic diseases of the population. There is an increase in the prevalence of early childhood caries, accompanied by a large number of complications and an increased need for dental care among the child population.

In the Republic of Uzbekistan, a high prevalence of caries of temporary teeth has been revealed, which increases with the age of children: from 6.2-10.8% in one-year-olds, to 46.2-54.0% in three-year-olds and 88.5-95.2% in six-year-olds. In adolescents aged 16-19, the prevalence of caries in permanent teeth reaches 84.0-88.1%. The majority of children do not practice oral hygiene, only 5.6% of children brush their teeth regularly, and 9.4% irregularly [1,9].

In the draft resolution of the Cabinet of Ministers of the Republic of Uzbekistan (06/20/2019, ID 3710), within the framework of guaranteed volumes of medical dental care, it is proposed to provide the children's population with annual preventive examinations in preschool educational institutions, planned dental care for children (except orthodontic and orthopedic) in the direction of a specialist, including tooth extraction using anesthesia, preparation and filling. However, it is known that only examinations and therapeutic measures, without preventive measures, cannot lead to significant success in reducing dental morbidity in the

population. It becomes obvious that there is a need to change the paradigm in the organization of dental care for children with the priority development of preventive care [1,2]. For preschool children, the most convenient form of service is the provision of dental preventive and curative care directly in preschool organizations. The programs of sealing fissures, hygienic education and upbringing, and applying fluoride varnish to teeth have been found to have a positive effect on maintaining dental health among kindergarten pupils [4].

The treatment of caries in children of early and preschool age is associated with a number of problems caused not only by the anatomical and physiological features of baby teeth, but also by the complexity of performing many manipulations. Fear of drills and injections are the main reasons for children's refusal of dental treatment [1]. In addition, it is difficult to organize a dentist's office in a kindergarten, and parents do not always have the time and financial resources to visit a dental clinic with a child. However, modern non-invasive and minimally invasive dental caries treatment methods can overcome these obstacles [5].

In recent years, interest in the role of fungal flora in the pathology of the child's body has increased several-fold [2, 5]. Among medical personnel in children's institutions, candidiasis carriage reaches 45%, which is of great importance for exogenous (nosocomial) infection of children [3, 4]. It has been proven that on care items (pacifiers, bottles, toys) and food products. Candidiasis is a chronic recurring disease caused by yeast-like fungi of the genus Candida and is difficult to treat [1].

The aim of the study was to evaluate the clinical efficacy of fluconazole in the treatment of candidiasis in newborns and young children.

**Study materials and methods:** We observed 196 children in their first year of life who visited the Bukhara Regional Children's Dental Clinic. Candidal infection was detected in 89 (45.4%) patients. Of these, 41 (46%) were boys and 48 (54%) were girls (two-thirds of the children were in their first six months of life). The patients were divided into three groups.

The first group included 35 children (39.3%) with oral mucosal candidiasis, the second group included 29 children (33%) with cutaneous candidiasis, and the third group included 25 children (28%) with combined mucosal and cutaneous lesions. Oral mucosal candidiasis typically does not require systemic therapy; local treatment alone is sufficient. Traditionally, this was achieved by treating the affected areas with 5-10% borax solutions in glycerin, aniline dyes, and 2% sodium bicarbonate solutions. Currently, the range of topical treatments has expanded significantly. If local treatment was ineffective, fluconazole was used

orally or intravenously as indicated. Results of the study and their discussion: For widespread oral candidiasis in 17 (49%) newborns and young children, fluconazole was used at a dose of 3–5 mg/kg of body weight per day in 3 doses. Candidiasis was diagnosed both independently and concomitantly with other infectious pathologies. Depending on the severity of skin lesions (candidal diaper rash – 11 (38%), total body involvement – 7 (28%)), children received both topical and fluconazole therapy. Fluconazole was prescribed at a dose of 5–6 mg/kg of body weight once daily. The duration of treatment was determined by the severity of the skin lesion. With topical therapy, the effect occurred on days 6–7; with fluconazole, on days 3–4 from the start of therapy. In patients with combined oral mucosal lesions and candidiasis in other parts of the gastrointestinal tract, 10 (14.4%) children received fluconazole orally, and 7 (10.1%) received it intravenously. Clinical observation showed that the initial therapeutic effect was observed by the second day in more than two-thirds of patients, and by the end of the first day in the remainder. Complete oral sanitation was achieved in most children within 3-4 days of therapy.

Clinical studies have shown that [1] 6 (39.3%) patients experienced resolution or significant reduction in the severity of their symptoms the day after administration of fluconazole. Three patients required a longer course of treatment, up to 5–7 days. This group included children with gastrointestinal candidiasis and long-term antibacterial therapy. High clinical efficacy, short treatment course, and low incidence of side effects allow fluconazole to be prescribed at the first signs of infection. Candidiasis in newborns and young children. All patients receiving fluconazole reported good tolerability of the drug, with no side effects or allergic reactions. Three-month follow-up revealed no recurrence of candidal infection.

**Conclusions:** As a result of the conducted comprehensive research, a new direction in dentistry has been substantiated, contributing to the improvement of children's dental health through the introduction of clinically and economically feasible models of dental treatment and preventive care for preschool children. Fluconazole is an effective and safe treatment for candidiasis in newborns and young children, and helps reduce the duration of disease symptoms and hospital stay. The effect of therapy is determined primarily by the professionalism of the physician in the optimal choice of antifungal drug and the method of its use in a specific patient, as well as the creation and maintenance of the necessary motivation in him to comply with full and regular treatment. The introduction of the proposed models of dental care for preschoolers helps to reduce dental morbidity, improve the dental health of children, and reduce the cost of providing

dental care to children. Minimally invasive treatment of temporary dental caries will also reduce the duration of treatment, reduce the level of stomatophobia among the child population, improve medical rehabilitation and increase the cost-effectiveness of treatment. The patient's active desire for recovery and careful adherence to all recommendations prescribed by the doctor are the most important prerequisites for a successful course of treatment.

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