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# АКТУАЛЬНІ ПИТАННЯ ТЕОРЕТИЧНОЇ ТА ПРАКТИЧНОЇ МЕДИЦИНИ

Topical Issues of Clinical and Theoretical  
Medicine

**Збірник тез доповідей**  
III Міжнародної науково-практичної конференції  
Студентів та молодих вчених  
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The aim of the work is analyzed literature data about effectiveness of inhaled steroids in children with bronchial asthma.

According to receptor affinity more active fluticasone and ciclesonide (22,0), than budesonide (9,4), flunisolide (1,8), and beclomethasone (0,4).

As for local anti-inflammatory action, first place occupies fluticasone and ciclesonide (1,7), than budesonide (1,0), flunisolide (0,7), and beclomethasone (0,4).

Systemic activity and potential possibility of formation systemic side effects more specific for flunisolide (12,8), and beclomethasone (3,5), less typical for budesonide (1,0) and fluticasone (0,07).

The relative bioavailability is high for budesonide (100%), also for beclomethasone (90%) and fluticasone (80-90%), but low for ciclesonide (63%) and flunisolide (21%).

Clinical efficiency of inhaled steroids was investigated in some trials. At equivalent doses all inhaled corticosteroids are equally effective (level of evidence A).

An improvement in asthma symptoms, exacerbations and side effects of different inhaled corticosteroids at equivalent doses could be neither demonstrated nor refuted and the trade-off between benefits and harms of using is unclear. The resource use or costs of different ICS should therefore also be considered in final decision making. Longer-term superiority trials are needed to identify the usefulness and safety of different inhaled corticosteroids. Additionally these studies should be powered for patient relevant outcomes (exacerbations, asthma symptoms, quality of life and side effects).

### **CASE OF ACUTE RHEUMATIC FEVER (ARF) THAT OCCURRED AFTER PRESUMED MACROLIDE FAILURE.**

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Group A Streptococcus (GAS), also known as Streptococcus pyogenic, is one of the most common pathogenic bacteria in children and causes a broad range of infections and disease states. Standard therapy for GAS pharyngitis is penicillin or amoxicillin. Alternative therapy with significant penicillin allergy is macrolide antibiotics or possibly clindamycin. Macrolide resistance (MR) in GAS remains an increasing worldwide concern. An 11-year-old previously healthy boy presented with fever, rash, joint pain, and swelling. His initial complaints were fever, sore throat, ear pain, and rash. The patient was reported to have a significant penicillin allergy. After 7 days of illness, he was empirically treated with azithromycin and diphenhydramine for 10 days. While still taking azithromycin and ~2 weeks after initial symptoms, he developed fever, ankle pain, and swelling. Upon presentation to hospital at 21 days after initial symptom onset, he was afebrile with normal vital signs. On examination, he had notable features of a faded, evanescent, erythematous patchy rash on upper and lower extremities and splotchy truncal rash. He had pain and swelling of his left ankle, and bilateral second to fourth metacarpal phalangeal joints. His leukocyte count was 10.6 G/l, hemoglobin 106 g/l, hematocrit 30%, platelet count 409 G/l, erythrocyte sedimentation rate 51 mm/h (normal 0–20 mm/h), C-reactive protein 5.8 mg/dL (normal, 0.00–0.8 mg/dL), antistreptolysin O titer 700 IU/mL (normal 0–200 IU/mL). The results of an echocardiogram, electrocardiogram, and chest radiograph were normal. A throat culture revealed an erythromycin-resistant, clindamycin sensitive strain of GAS. He was treated with clindamycin and aspirin. He showed prompt resolution of his arthritis with resolution of the rash within 2 weeks and no recurrence. The results of a repeat throat culture were negative, and he received erythromycin as secondary prophylaxis.

Group A Streptococcal pharyngitis is a common illness in the pediatric population. Penicillin or amoxicillin remain the standard therapy. In nonanaphylactic cases of penicillin allergy, a first-generation cephalosporin may be used.