An update on evidence based treatment in juvenile idiopathic arthritis

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Juvenile idiopathic arthritis (JIA) is the most common chronic rheumatic disorder in children and is also a major cause of acquired disability and quality of life impairment in childhood. Children with oligoarticular JIA are usually treated with NSADS and intraarticular steroid injections. For children with polyarticular course JIA, methotrexate (MTX) is the drug of first choice since it provides significant clinical benefits, with an acceptable toxicity profile. For children not responding to MTX, the introduction of the so called biologic agents has determined a substantial advantage for the therapy of JIA since for the first time we have now drugs able to selectively block key components of the inflammation cascade.

Biologic agents can be globally divided into 2 categories: drugs able to block the tumor necrosis factor (TNF) (etanercept, infliximab, adalimumab and others) and more recently drugs with different mechanism of action (eg abatacept, tocilizumab, kineret, canakinumab ecc). In general biologic agents, also for their elevated cost, have to administered in children with severe arthritis non responsive to conventional therapies, primarily MTX.

The real novelty in these last years, , has been the availability of biologic agents to be specifically used for the treatment of sistemic JIA where, along with arthritis, children have sistemic manifestations such as fever, rash, serositis, lymphadenopathy etc. These new drugs are indeed able to block selectively molecules that has been shown to be pivotal in the inflammatory process such as IL6 (tocilizumab) and IL 1 (kineret, canakinumab and others)

This review will present the key evidence from the literature regarding the efficacy and safety profile of biologic agents. Globally data reported show that these drugs are efficacious and safe in the short term. Data are still lacking for the long term safety profile.

Most of the biologic agents have been tested (or are currently under study) thanks to the involvement of the Pediatric Rheumatology International Trials Organisation (PRINTO at www.printo.it).