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50 Years Ago in *THE JOURNAL OF PEDIATRICS*

Revolutionary Changes in the Management of Juvenile Idiopathic Arthritis

Calabro JJ. Management of juvenile rheumatoid arthritis. *J Pediatr* 1970;77:355-65.

This comprehensive Medical Progress report outlines the subtypes of juvenile rheumatoid arthritis (JRA), clinical manifestations, complications, and prognosis, with an emphasis on management. Unfortunately, the medical management options were few and largely not effective. The mainstay of therapy was high dose aspirin (90-130 mg/kg/day) divided 4 to 6 times per day; this was associated with many adverse effects. Other options included gold injections for polyarthritis, which was effective in ~20% of patients, also with many adverse effects, particularly hematologic and renal. Phenylbutazone was associated with agranulocytosis, especially in younger children. Corticosteroids were offered for systemic features (high fever, uveitis, peri/myocarditis, vasculitis), but once started were difficult to wean. Chloroquine was associated with severe potential cardiotoxicity in younger children. The report emphasized physical therapy, including range-of-motion exercises, splints, and avoiding bed rest, although this was often difficult in patients with severe arthritis. A large part of this report was devoted to orthopedic surgical therapies for the many complications of chronic arthritis and a debate on the effect of early synovectomy.

Although we still cannot cure JIA, modern therapies, when used in a timely fashion in accordance with new guidelines, can prevent joint damage, deformities, and disability.¹ The need for surgery in newly diagnosed patients is extremely rare. Current treatments include corticosteroid injections for oligoarthritis, also mentioned by Calabro, but this is combined with newer, longer-acting agents, methotrexate, and other synthetic disease-modifying drugs and a growing list of biologic medications targeting an increasing list of cytokines, T and B cell antigens, and intracellular trafficking pathways of inflammation.

A vivid example of the results of this revolution was demonstrated in a talk I heard from Dr Daniel Lovell, one of my mentors and principal investigator of many of the studies of the new therapies. The opening slide showed, side by side, children who attended the annual arthritis camp run by Cincinnati Children's Hospital Medical Center (Camp Wekandu) in 1987 and in 2011. In the former photo, most of the children were pictured in wheelchairs or using walkers, whereas in the latter photo, only 1 child was using a walker. We can do even better in 2020.

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