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Anti-inflammatory treatment: treat to target

Maria Cristina Maggio (mariacristina.maggio@unipa.it)
Department of Health Promotion Sciences Maternal and Infantile Care, Internal Medicine and Medical Specialities "G. D'Alessandro", University of Palermo, Italy

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Autoinflammatory diseases (AIDs) are monogenic disorders [1] characterized by overproduction of IL-1 β . Remission, prevention of complications, control of inflammation, a good quality of life are goals of the treatment. A personalized treatment must be started precociously [2] and approved by clinicians, patients and their families, considering children in these long-lasting treatment decisions. A common therapeutic approach is effective in multifactorial AIDs, where inflammatory cytokines are increased by different triggers, as sJIA, Kawasaki disease, HLH, IBD, Steven Johnsons Syndrome, auto-immune diseases: the infusion of high doses of IVIG, modifying cytokines and immune response. IVIG are effective in the resolution of fever, hepatitis and/or cholestasis also if triggered by infections [3]. Anti-TNF- α drugs are effective in IBD and Behcet disease; Infliximab in the control of fever in refractory KD, not improving coronary artery lesions (CAL). Anakinra, IL-1 receptor antagonist, is effective on clinical manifestations and CAL [4-5]. Treatment of sJIA improved with anti-IL-1 (Canakinumab, Anakinra) and anti-IL-6 (Roactemra) biological drugs. The early employ of Canakinumab in a "therapeutic window" increases the possibility to gain the remission [6]. Systemic Lupus Erythematosus and monogenic interferonopathies are successfully treated with JAK inhibitors, a high selective treatment. Remission is now evaluated by clinimetrics to define the efficacy of treatment.

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Courtesy robotic bodies for small bedridden patients

Roberto Mancin¹, Flavio Sartoretto², Agnese Suppiej³
¹Department of Women's and Children's Health, University of Padua, Padua, Italy; ²Department of Environmental Sciences, Informatics and Statistics, University of Venice, Venice, Italy; ³Department of Medical Sciences- Pediatric Section, University-Hospital of Ferrara, Ferrara, Italy

Correspondence: Roberto Mancin (roberto.mancin@unipd.it)

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The scientific literature reports an increasing number of actions aimed at providing mobile robots that allow telepresence experiences to bed-ridden adult patients [1]. A recent review published in *BMJ Open* [2] shows that the use of such robots is increasing very quickly. The nationality of the authors of the articles analyzed in this work is mainly Italy. The use of humanoid and empathic robots such as Nao and Pepper is spreading also in Italian pediatric hospitals. It follows that it is possible and appropriate, as already happens for adults, to use these robots not only for rehabilitation, surgery and distraction [Dawe et al 2019] but also to promote inclusion, by employing them as a telepresence robot. In this case it is no longer the medical-nursing staff that "guides" the robot used for the patient but the patient himself who uses the humanoid robot as a "courtesy body", a robotic avatar, controlled from the bed or from the stay. At present, applications of this kind reported in literature are very scarce and focused exclusively in protected contexts (hospitals and other places of care) but not in other environments (museums, schools, homes for holidays, mountain refuges). The number of articles containing the keywords "robot" and "telepresence" has increased exponentially in the period 2000-2017. Yet, nothing has been published to date regarding the developmental age. The aim of this work was therefore to verify whether, within a pediatric hospital, humanoid robots can have an inclusive role in contexts typical of the developmental age (school, sports, oratory, summer camps). In particular 3 models of humanoid robots were used in extra-hospital settings and remote-controlled by a underage patient. From these preliminary experiences, telepresence robotics carried out with humanoid and empathic robots seems to be promising for hospitalized children. Entrusting a small robot avatar use to each underage patient, with the goal to reach an earlier inclusion, is not only technically possible but also sustainable from the social, economic and environmental points of view. The use of BCI (Brain Computer Interface) technologies in children could make this opportunity universal.

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Kawasaki Disease

Alessandra Marchesi, Alberto Villani
UOC Pediatria Generale e Malattia Infettive, Ospedale Pediatrico Bambino Gesù, Roma, Italy

Correspondence: Alessandra Marchesi (alessandra.marchesi@opbg.net)
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Kawasaki disease (KD) is an acute, systemic vasculitis [1,2]. According to the "Revised International Chapel Hill Consensus Conference Nomenclature of Vasculitides" of 2012, its target are small and medium diameter vessels in each organ and apparatus. (3) KD is a self-limited disease with unknown, probably multi-factor, aetiology, which primarily affects infants and children under five years. Diagnosis of