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Neonatal abstinence syndrome



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Neonatal withdrawal or neonatal abstinence syndrome (NAS) is a withdrawal syndrome in neonates due to acute cessation of the exposure to either illicit or prescribed drugs. Similar to tolerance or dependence, withdrawal may occur as a result of repeated or chronic administration of drugs, but also after short-term high dose use, like e.g. during neonatal stay. Consequently, NAS can appear both following discontinuation of drugs taken by the pregnant mother, as well as following discontinuation of drugs administered intentionally to the newborn.

The most commonly involved compounds are opioids, selective serotonin reuptake inhibitors (SSRIs), benzodiazepines, as well as cannabis or nicotine. The incidence of opioid related neonatal abstinence syndrome (NAS) has increased significantly in the last decade, co-linear with the increased medical use of prescription opioids in adults, including in young women.

The clinical picture of neonatal abstinence syndrome mimics to a large extent the syndrome of opioid withdrawal in adults ('cold turkey'), and includes both neurological (e.g. agitation, crying, sleep disturbance, feeding difficulties, but also seizures) as well as extra-neurological symptoms (e.g. diarrhea, vomiting, perianal excoriations, sneezing, sweating, hyperthermia). Besides pharmacological interventions, we strongly recommend to consider the impact of other interventions like swaddling, traditional supportive interventions, but also breastfeeding since this results in a reduced incidence and severity of NAS (NNT 6-8°). This diagnosis is also associated with subsequent impaired neurological outcome.

Biography

Prof Karel Allegaert, MD, PhD is a pediatrician-neonatologist and clinical pharmacologist. He is associate Professor at the Department of Development and Regeneration, Biomedical Sciences KU Leuven (20%) and Consultant at the Departments Intensive Care and Pediatric Surgery, and Neonatology, Erasmus MC Rotterdam (80%). His clinical research has a focus on perinatal and pediatric pharmacology and pediatric pain management and has resulted in more than 360 PubMed publications.

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