Paracetamol, autism, and the presidential panacea: when bravado meets evidence (and loses)

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The latest episode in this anti-science melodrama comes as no surprise: Donald Trump has returned to center stage by claiming that paracetamol used during pregnancy "leads" to autism and, as a bonus, touting folinic acid (leucovorin) as a "cure" for autism spectrum disorder (ASD).[1,2] The mixture is perfect for the headlines: an everyday villain, a convenient scapegoat—the mothers—and the promise of pharmacological redemption. What is missing is the detail that underpins clinical practice: robust evidence, obtained by appropriate methods and interpreted with a sense of proportion.

The key piece in this debate is the Swedish population study published in the Journal of the American Medical Association (JAMA) in 2024, with nearly 2.5 million births and analysis between biological siblings.[3] In conventional models, the use of paracetamol appeared to be slightly associated with autism spectrum disorder (ASD) and attention deficit/hyperactivity disorder (ADHD). This "signal"—a statistical association of small magnitude, without causal evidence—disappeared when the authors compared siblings with discordant exposure. This design mitigates confounding by genetics and family environment, the risk ratios approach zero, and there is nodose-response gradient.[3] In simple terms: when measured correctly, the effect disappears.

Not surprisingly, the recommendations of technical bodies remained stable. The European Network of Teratology Information Services (ENTIS) maintains paracetamol as the first choice in pregnancy when clinically indicated, at the lowest effective dose and for the shortest time necessary.[4] On September 23, 2025, the European Medicines Agency (EMA) reaffirmed that nothing has changed in the European Union regarding the use of paracetamol in pregnancy.[5] Similarly, the American College of Obstetricians and Gynecologists (ACOG) reiterated that paracetamol remains the safest option for pain and fever in pregnancy, provided it is used with clinical judgment.[6]

Pain and fever during pregnancy are not cosmetic details; they are frequent problems that interfere with quality of life and, when neglected, worsen outcomes. Low back pain and pelvic pain are highly prevalent and tend to intensify in the third trimester; a recent meta-analysis confirms the magnitude of the problem and the functional impact that requires an active approach.[7] Untreated maternal fever is also a concern, especially in infectious conditions. Responsible management, therefore, is part of the care—not a luxury.[5,6]

If paracetamol were banned in response to headlines, pregnant women would be left with a menu of riskier alternatives precisely during the most sensitive stages of fetal development. Nonsteroidal anti-inflammatory drugs (NSAIDs) have known risks: the Food and Drug Administration (FDA) warns of oligohydramnios from the 20th week onwards and constriction of the ductus arteriosus at the end of pregnancy.[8] Dipyrone (metamizole) has a mixed regulatory history, is formally contraindicated in the third trimester due to fetotoxicity, and has been associated with oligohydramnios and ductus arteriosus constriction with prolonged use at the end of the second trimester; if unavoidable during this window, brief use and ultrasound monitoring are recommended.[9,10] In addition, it is not approved in the United States (U.S.) due to the risk of agranulocytosis.[11] In this comparative scenario, paracetamol remains the first-line treatment: indicated

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when clinically necessary, at the lowest effective dose and for the shortest possible time.[4-6]

Why, then, do we continue to see headlines insinuating causality between a ubiquitous analgesic and complex neurodevelopmental outcomes? An important part of the answer is methodological. Observational studies of ubiquitous exposures capture more of the family and health context—genetics, socioeconomic conditions, comorbidities, and care practices—than an isolated pharmacological effect. Pregnant women with migraines, infections, chronic pain, anxiety, or depression use more painkillers; these same conditions, regardless of medication, are related to neuropsychiatric outcomes in offspring.[3] Without adequate control for confounding factors, statistics tend to create mirages.

There is also a cultural and political reason for the persistence of false certainties: the old rhetoric of maternal guilt. Whenever the subject is neurodevelopment, responsibility falls on the mother. This narrative shifts the burden of failure to the female body and perpetuates surveillance over reproductive choices. It is a reflection of patriarchal structures that historically transform statistical uncertainty into moral guilt: the uterus becomes the presumed site of error, and women become permanently suspects.[12] The process miseducates, hurts, and silences, diverting attention from the real determinants—genetics, environment, social conditions, and biological chance—to the myth of the omnipotent and eternally guilty mother.[12]

In public health, this moralism not only worsens the outcomes but also perpetuates gender inequalities. By undermining women's autonomy, it legitimizes practices of symbolic violence and empties the clinic of its commitment to care. Recognizing the informed autonomy of pregnant women is, therefore, also a feminist act—and a condition for truly emancipatory practices.[12] What good clinics need to cultivate is method and skilled listening; what they must reject is the temptation to convert uncertainty into moral judgment.

The social effects of this rhetoric add to an economy of misinformation that has proven lucrative. Since Andrew Wakefield's fraud, whose official retraction in 2010 did not contain the anti-vaccine wave, spurious associations with autism have become big business.[13] The script is familiar: create an everyday risk and then sell miracle "solutions." Poorly constructed dossiers, "detox protocols," ozone therapy, and other therapies with no scientific basis proliferate, with grandiose promises and modest or non-existent results.[13] The fear industry thrives by exploiting anxieties, blaming mothers, and promising shortcuts; the real cost falls on families, health services, and public policies.[13]

And what about folinic acid, hailed as the "cure" of the moment? Small randomized clinical trials suggest benefits in very specific subgroups of autistic children, especially those with autoantibodies against the alpha folate receptor, with language gains and modest improvement in overall scores.[14,15] Still, small samples, short follow-up periods, partly subjective outcomes, and fragile subgroup analyses limit interpretation. Read with skepticism—as preliminary results should be—these findings do not support generalized clinical recommendations or authorize narratives of "cure."[14,15]

In the practical management of pain and fever during pregnancy, the responsible approach remains the same as always: assess indication, dose, and duration. Acetaminophen remains the first choice when clinically indicated; use the lowest effective dose for the shortest time necessary.[4-6] NSAIDs should be avoided, as previously mentioned, from 20 weeks onwards and, above all, at the end of pregnancy, when the risk of arterial duct constriction is greater; if absolutely indispensable in the intermediate window, the decision must be individualized and restricted use.[8] As for dipyrone, maintain the contraindication in the third trimester and, if an exceptional clinical scenario requires its use at the end of the second trimester, limit the duration and monitor by ultrasound, avoiding the risk of oligohydramnios and ductus arteriosus constriction.[9,10] Finally, remember that the drug is not approved in the U.S. due to the risk of agranulocytosis.[11]

Ultimately, the question "does paracetamol cause autism?" was addressed with a design capable of separating association from cause, and the answer, so far, is negative.[3] Regulatory agencies and scientific societies, whose job is it to weigh risks and benefits in public health, have maintained their recommendations.[4-6] The temptation to decide a priori—by the podium, the algorithm, or the

click—comes at a high cost in social trust and family suffering; deciding with scientific method is hard work, but it restores predictability to care and dignity to people.

In short, good practice does not need heroes, it needs research. By resisting maternal blame and the seduction of miracle solutions, we reaffirm the triad that underpins responsible medicine—scientific method, measurement, and responsibility—and ensure that obstetric care continues to be, above all, a defense of informed autonomy. It is less noisy than a rally, but infinitely more useful for mothers and babies.

Author's contribution

The author conceived the article and declares that there is no conflict of interest.

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