

Inflammatory myofibroblastic tumours have an intermediate malignant potential. Their presentation varies depending on their anatomical location and systemic inflammatory manifestations. The management is based on tumour location, feasibility of surgical resection, the course of disease and ALK expression. Treatment with ALK inhibitors has shown promising results. The findings in our series are similar to those reported in the previous literature. We contribute information on a tumour located in the ribcage, a site for which the available data is scarce.

## References

- Camela F, Gallucci M, di Palma E, Cazzato S, Lima M, Ricci G, et al. Pulmonary inflammatory myofibroblastic tumor in children: a case report and brief review of literature. *Front Pediatr.* 2018;6:35.
- Liu L, Kong X, Lu X, Cao D. Pediatric endobronchial inflammatory myofibroblastic tumor: a case report and review of the literature. *Clin Pract.* 2016;6:853.
- Cantera J, Alfaro M, Rafart D, Zalazar R, Muruzabal M, Barquín P, et al. Inflammatory myofibroblastic tumours: a pictorial review. *Insights Imaging.* 2014;6:85–96.
- Coffin C, Hornick J, Fletcher C. Inflammatory myofibroblastic tumor. *Am J Surg Pathol.* 2007;31:509–20.
- Vargas-Madueno F, Gould E, Valor R, Ngo N, Zhang L, Villalona-Calero M. EML4-ALK rearrangement and its therapeutic implications in inflammatory myofibroblastic tumors. *Oncologist.* 2018;23:1127–32.
- Brivio E, Zwaan C. ALK inhibition in two emblematic cases of pediatric inflammatory myofibroblastic tumor: efficacy and side effects. *Pediatr Blood Cancer.* 2019;66:e27645.

Gorka Martínez Navarro<sup>a,\*</sup>, María Pérez Chamorro<sup>a</sup>, Diana Veiga Canuto<sup>b</sup>, Antonio Juan Ribelles<sup>a</sup>, José María Fernández Navarro<sup>a</sup>

<sup>a</sup> Sección de Oncología y Hematología Infantil, Hospital Universitari i Politècnic La Fe, Valencia, Spain

<sup>b</sup> Servicio de Radiodiagnóstico, Hospital Universitari i Politècnic La Fe, Valencia, Spain

\* Corresponding author.

E-mail address: [martinez\\_gor@gva.es](mailto:martinez_gor@gva.es) (G. Martínez Navarro).

<https://doi.org/10.1016/j.anpede.2020.12.016>  
2341-2879/ © 2021 Published by Elsevier España, S.L.U. on behalf of Asociación Española de Pediatría. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## Current content of infant cereals and possible alternatives: Not everything counts in childhood nutrition<sup>☆,☆☆</sup>



### Contenido actual de los cereales para lactantes y posibles alternativas: no todo vale en nutrición infantil

Dear Editor:

In recent years, an abundance of information has spread in social media suggesting that infants should not be fed baby cereal (BC) products on account of their high free sugar content and their sweet taste.<sup>1</sup> Proposed alternatives include corn starch, semolina, oatmeal or brown rice.

The advantages of introducing BC products in complementary feeding are their texture and the contribution of fibre, energy, iron and zinc, mainly. The disadvantages are the free sugar content and sweet taste of these products.<sup>2</sup>

The Sociedad Española de Gastroenterología, Hepatología y Nutrición Pediátrica (Spanish Society of Paediatric Gastroenterology, Hepatology and Nutrition, SEGHP)<sup>3</sup> recommends that the intake of free sugars until age 2 years amount to less than 5% of the total energy intake (TEI). Since consumption of fruit juice in the first year of life is currently discouraged, BC are the main source of free sugars in the infant's diet.

In 2018, we reviewed the nutrient composition of 98 BC brands sold in Spain. Assuming a mean energy intake of 750 kcal/day in the second semester of life based on current recommendations, consumption of 25 g a day of BC would correspond to an intake of free sugars exceeding 5% of the TEI in 1 brand, or 5 brands in case of consumption of 30 g per day. The contribution of fibre of BC would amount to 1.2–1.5 g per day. In 2020, we reviewed 110 brands of BC and found an overall decrease in sugar content (the percentage of products with 5 or fewer grams of sugar per 100 g of product went from 18.3% to 30.9%) and an increase in the fibre content (45.4% compared to the previous 40.8%).<sup>4</sup> At present, daily consumption of 25 or 30 g of BC of any commercial brand does not contribute more than 5% of the TEI in the form of free sugars.

On the other hand, an excessive protein intake in the first months of life can predispose to future obesity. For this reason, several regional governments and paediatric societies in Spain, such as the Asociación Española de Pediatría de Atención Primaria (AEPap),<sup>5</sup> recommend an intake of high biological value protein (HBVP) in complementary feeding of 20–40 g. Daily consumption of 500 mL of stage 2 formula and 20–40 g of meat or fish contribute 2.2–7.2 mg of iron

<sup>☆</sup> Please cite this article as: Vitoria Miñana I. Contenido actual de los cereales para lactantes y posibles alternativas: no todo vale en nutrición infantil. *An Pediatr (Barc).* 2021;95:366–367.

<sup>☆☆</sup> Previous presentation: partial results of this study were presented at the XXVI Congress of the Sociedad Española de Gastroenterología, Hepatología y Nutrición Pediátrica, May 16–18, 2019, Santander, Spain.

**Table 1** Iron and protein contribution of 500 mL of stage 2 formula or human milk and 20–40 g of high-protein foods or legumes.

Content	EFSA 2013 DRI 2011 Daily	HM 500 mL	S2F 20–40 g	Chicken thigh	Turkey thigh	Lean beef	Whiting	Chicken liver	Egg yolk	Peas	Lentils
Protein, g	10–11	5	5.2	4–8	4–8	4–8	2.5–5	4.5–9	3.5–7	4–8	5–10
Iron, mg	8–11	0.3	2–6.5	0.3–0.6	0.3–0.6	0.4–0.7	0.2–0.4	1.5–3.0	1.2–2.4	[0.11–12]	0.3–0.7

DRI, dietary reference intake; HM, human milk; S2F, stage 2 formula.

**Table 2** Iron and protein content of a 25- to 30-g portion of baby cereal, corn starch, semolina, oatmeal and brown rice.

Content	Baby cereal 25-30 g	Corn starch 25 g	Semolina 25 g	Oatmeal 25 g	Brown rice 25 g
Protein, g	1.7–2.6	0.06–0.07	3.2–3.8	0.4–0.5	0.7–0.8
Iron, mg	1.8–3	0.12–0.14	0.30–0.36	0.15–0.18	0.15–0.18

(Table 1), based on data from the BEDCA Database on Food Nutrient Composition of Spain (<https://bedca.net>). Daily consumption of 500 mL of breastmilk contributes 0.5–1 mg of iron per day. Consumption of chicken liver or egg yolk can achieve iron intakes of 3.5 or 9.5 mg of iron a day in formula-fed infants or 1.5 or 2.7 mg a day in breastfed infants. Thus, daily consumption of 20–40 g of meat or fish in complementary feeding combined with 500 mL of stage 2 formula suffices to achieve the estimated required iron intake of 8–11 mg a day (11 mg according to the daily recommended intake of the Institute of Medicine [IOM-2011] and 8 mg according to the European Food Safety Authority [EFSA-2013]). The deficit is greater in breastfed infants.

Consumption of BC may be necessary to achieve the recommended 8–11 mg of iron a day, as 25–30 g of BC contribute 1.8–3 mg of iron. In contrast, the alternatives to BC contribute 0.12–0.36 mg (Table 2). The consumption of legumes would not offer significant improvement (0.3–0.7 mg) (Table 1).

In conclusion, the recommendation of consuming lower amounts of HBVP in complementary feeding must be accompanied by the recommendation to consume foods rich in iron such as BC, as most alternatives do not contribute sufficient amounts of iron. Thus, BC should ideally be based on whole grains and not hydrolysed or hydrolysed to a lesser extent to reduce their free sugar content.<sup>6</sup>

## Conflicts of interest

The author has received fees to give conferences from corporations that produce food products for infants and children, such as Abbott, Hero, Humana, Nestlé, Mead Johnson, Nutribén, Nutricia, Ordesa and Sanutri.

## References

1. Los cereales ni en papillas ni en las leches. El País (14-2-19). [Accessed 28 October 2020]. Available from:

[https://elpais.com/elpais/2019/02/04/mamas\\_papas/1549284512841239.html](https://elpais.com/elpais/2019/02/04/mamas_papas/1549284512841239.html).

2. Núñez-Ramos R, Moreno-Villares JM. Los cereales en la alimentación del lactante y el niño pequeño. *Acta Pediatr Esp.* 2019;77:83–9.
3. Fidler Mis N, Braegger C, Bronsky J, Campoy C, Domellöf M, Embleton ND, et al. ESPGHAN Committee on Nutrition. Sugar in infants, children and adolescents: a position paper of the European society for paediatric gastroenterology, hepatology and nutrition committee on nutrition. *J Pediatr Gastroenterol Nutr.* 2017;65:681–96.
4. Vitoria I, Correcher P [Accessed 28 October 2020] Available from: Papel de las recomendaciones nutricionales de ESPGHAN sobre azúcares libres en la reformulación de los cereales para lactantes. Libro de trabajos SEGHPN; 2020. p. 149–50 <https://www.seghnp.org/documentos/libro-de-trabajos-2020-de-seghnp>
5. AEPAP. Las proteínas en la alimentación del bebé. [Accessed 28 October 2020]. Available from: <https://www.familiaysalud.es/vivimos-sanos/alimentacion/alimentarse-cada-edad/las-proteinas-en-la-alimentacion-del-bebe>.
6. Klerks M, Bernal MJ, Roman S, Bodenstab S, Gil A, Sanchez-Siles LM. Infant cereals: current status, challenges, and future opportunities for whole grains. *Nutrients.* 2019;11:473.

Isidro Vitoria Miñana

Unidad de Nutrición y Metabolopatías, Hospital Universitario La Fe, Valencia, Spain  
E-mail address: [vitoria.isi@gva.es](mailto:vitoria.isi@gva.es)

<https://doi.org/10.1016/j.anpede.2021.09.001>  
2341-2879/ © 2021 Published by Elsevier España, S.L.U. on behalf of Asociación Española de Pediatría. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).