Neonatal growth velocity of preterm infants: The weight Z-score change versus Patel exponential model

Titre	Neonatal growth velocity of preterm infants: The weight Z-score change versus Patel exponential model
Type de publication	Article de revue
Auteur	Simon, Laure [1], Hanf, Matthieu [2], Frondas-Chauty, Anne [3], Darmaun, Dominique [4], Rouger, Valérie [5], Gascoin-Lachambre, Géraldine [6], Flamant, Cyril [7], Nusinovici, Simon [8], Rozé, Jean-Christophe [9]
Editeur	Public Library of Science
Type	Article scientifique dans une revue à comité de lecture
Année	2019
Langue	Anglais
Date	2019
Numéro	6
Pagination	e0218746
Volume	14
Titre de la revue	PLoS One
ISSN	1932-6203
Résumé en anglais	BACKGROUND: Different methods are used to assess the growth of preterm infants during neonatal hospital stay. The primary objective was to compare two methods for assessing growth velocity: g/kg/d according to the Patel exponential model (EM) and change in weight z-score (ZS) according to Fenton curves. The secondary objective was to highlight factors influencing the level of agreement between the two methods. METHODS: Preterm infants born before 33 weeks were included. Growth velocity was computed by EM and ZS methods and linear regression was used to predict what growth velocity by EM method would be obtained using the ZS method. Differences between EM growth velocity and EM growth velocity predicted by ZS method were then used to assess the level of agreement between the two methods. A difference between -2 and +2 g/kg/day was considered as fair agreement, greater than ± 4 g/kg/day as poor agreement, and as disagreement otherwise. RESULTS: Among the 3954 children included, we observe a fair agreement in 2471 children (62.5%), a poor agreement in 1278 (32.3%) and a disagreement in 205 children (5.2%). Birth weight and gestational age explained 31% and 25%, respectively, of the variance in the difference between the two methods. CONCLUSIONS: In more than a third of enrolled children, the two methods for measuring growth velocity disagreed substantially. As variation of weight Z-score takes into account infant gestational age and gender, it could be more suitable to analyze a population of preterm infants with a wide range of gestational age.
URL de la notice	http://okina.univ-angers.fr/publications/ua20353 [10]
DOI	10.1371/journal.pone.0218746 [11]

Lien vers le document	https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0218746 [12]
Autre titre	PLoS ONE
Identifiant (ID) PubMed	31251763 [13]

Liens
[1] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=39968
[2] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=30629
[3] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=39969
[4] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=38443
[5] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=30625
[6] http://okina.univ-angers.fr/g.gascoin/publications
[7] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=2039
[8] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=30622
[9] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=2044
[10] http://okina.univ-angers.fr/publications/ua20353
[11] http://dx.doi.org/10.1371/journal.pone.0218746
[12] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0218746
[13] http://www.ncbi.nlm.nih.gov/pubmed/31251763?dopt=Abstract