

Search

Advanced

Help

[Display Settings:](#) Abstract

[Send to:](#)


J Pediatr. 2012 May;160(5):844-8.e1. doi: 10.1016/j.jpeds.2011.11.025. Epub 2011 Dec 16.

E-selectin is elevated in cord blood of South Asian neonates compared with Caucasian neonates.

Boon MR, Karamali NS, de Groot CJ, van Steijn L, Kanhai HH, van der Bent C, Berbée JF, Middelkoop B, Rensen PC, Tamsma JT.

Department of General Internal Medicine, Leiden University Medical Center, Leiden, The Netherlands.
m.r.boon@lumc.nl

Abstract

OBJECTIVE: To test the hypothesis that the increased risk of type 2 diabetes mellitus and coronary artery disease in South Asian subjects could be caused by the presence of endothelial dysfunction in early life. We studied markers of endothelial dysfunction in umbilical cord blood of South Asian neonates and compared these with that of Caucasian control subjects.

STUDY DESIGN: From South Asian (n = 57) and Caucasian (n = 21) neonates, cord blood was collected and levels of glucose, insulin, lipids, and markers of endothelial dysfunction (E-selectin, intercellular adhesion molecule 1, vascular cell adhesion molecule 1) and inflammation (C-reactive protein) were measured.

RESULTS: Plasma E-selectin levels were significantly higher in South Asian neonates (46.7 versus 33.5 ng/mL, $P < .001$), and levels of intercellular adhesion molecule 1 and vascular cell adhesion molecule 1 did not differ. Furthermore, South Asian neonates had hyperinsulinemia ($P = .043$), dyslipidemia (with significantly higher triglyceride and lower high-density lipoprotein cholesterol levels), and higher C-reactive protein levels (75.7 versus 43.8 ng/mL, $P = .009$).

CONCLUSIONS: South Asian newborns are characterized by elevated E-selectin levels in line with the hypothesis that endothelial dysfunction is present early in life. In addition, hyperinsulinemia, dyslipidemia, and inflammation are present. Because many pathogenic variables for coronary artery disease and type 2 diabetes are already present at birth in South Asian patients, the question arises whether rigorous childhood lifestyle intervention could be beneficial.

Copyright © 2012 Mosby, Inc. All rights reserved.

PMID: 22177994 [PubMed - indexed for MEDLINE]

[+](#) **Publication Types, MeSH Terms, Substances**

[+](#) **LinkOut - more resources**

You are here: NCBI > Literature > PubMed

[Write to the Help Desk](#)

GETTING STARTED

[NCBI Education](#)
[NCBI Help Manual](#)
[NCBI Handbook](#)

RESOURCES

[Chemicals & Bioassays](#)
[Data & Software](#)
[DNA & RNA](#)

POPULAR

[PubMed](#)
[Nucleotide](#)
[BLAST](#)

FEATURED

[Genetic Testing Registry](#)
[PubMed Health](#)
[GenBank](#)

NCBI INFORMATION

[About NCBI](#)
[Research at NCBI](#)
[NCBI Newsletter](#)

| | | | | |
|--|--|--------------------------------|---------------------------------------|----------------------------------|
| Training & Tutorials | Domains & Structures | PubMed Central | Reference Sequences | NCBI FTP Site |
| | Genes & Expression | Gene | Map Viewer | NCBI on Facebook |
| | Genetics & Medicine | Bookshelf | Human Genome | NCBI on Twitter |
| | Genomes & Maps | Protein | Mouse Genome | NCBI on YouTube |
| | Homology | OMIM | Influenza Virus | |
| | Literature | Genome | Primer-BLAST | |
| | Proteins | SNP | Sequence Read Archive | |
| | Sequence Analysis | Structure | | |
| | Taxonomy | | | |
| | Training & Tutorials | | | |
| | Variation | | | |

[Copyright](#) | [Disclaimer](#) | [Privacy](#) | [Browsers](#) | [Accessibility](#) | [Contact](#)

National Center for Biotechnology Information, U.S. National Library of Medicine
8600 Rockville Pike, Bethesda MD, 20894 USA

