

# C-section delivery does not decrease at-birth fracture rates in infants with rare bone disease

October 22 2015

---

Cesarean delivery was not associated with decrease in the at-birth fracture rates in infants with osteogenesis imperfecta, a rare bone disorder, said a consortium of researchers led by Baylor College of Medicine.

The new research, published in the journal *Genetics in Medicine*, is the first study to come from the Brittle Bone Disorders Consortium, a new National Institutes of Health collaborative clinical research network focused on brittle [bone disorders](#) such as osteogenesis imperfecta.

Osteogenesis imperfecta is a [connective tissue disorder](#) that affects approximately 1 in 15,000 people. The major clinical feature of the disorder is increased fragility of bone, which leads to recurrent fractures and bone deformities. In the severe forms of the disorder, fractures occur in utero. With increased availability of prenatal ultrasound examination and genetic testing, many are diagnosed before birth.

"There was this notion that under controlled delivery circumstances such as a [cesarean section](#), there would be less risk of fracture to the newborn during delivery," said Dr. Sandesh Nagamani, director of the Clinic for Metabolic and Genetic Disorders of Bone and the last author on the report. However, the premise had never been studied systematically.

The team had access to data collected uniformly by the six clinical

centers in North America as a part of the OI Linked Clinical Research Centers led by Dr. V. Reid Sutton, professor of molecular and [human genetics](#) at Baylor. "We set out to understand whether cesarean section was associated with decreased fracture rates in these patients, as compared to vaginal delivery," said Sutton.

In a study involving 540 patients with osteogenesis imperfecta - the largest study of any on this topic - the team found that cesarean delivery was not associated with decreased fracture rate in the newborns.

"The large sample size allowed for detailed statistical evaluation of multiple covariates, and our analyses show that when accounting for these variables, there was no differences in fracture rates based on whether the delivery was by cesarean or vaginal route," said Sunil Bellur, a trainee at Baylor under the Texas Department of Health Services Summer Scholarship Program for 2014 (at the time of the study) and Dr. Mahim Jai, postdoctoral fellow in molecular and human genetics at Baylor, who are the lead authors of the manuscript.

"This new study presents updated information for obstetricians and women pregnant with infants diagnosed with osteogenesis imperfecta to determine the best method of [delivery](#) for their individual situation. We know now that cesarean section doesn't necessarily mean better for these women," said Nagamani.

"Providing evidence-based answers to clinically relevant questions is not easy when it comes to rare diseases. Large collaborative efforts are pivotal not only for understanding natural history of rare diseases, but also in advancing therapies," said Dr. Brendan Lee, Robert and Janice McNair Endowed Chair of Molecular and Human Genetics and the principal investigator for the Brittle Bone Disorders Consortium.

Provided by Baylor College of Medicine

Citation: C-section delivery does not decrease at-birth fracture rates in infants with rare bone disease (2015, October 22) retrieved 19 April 2024 from

<https://medicalxpress.com/news/2015-10-c-section-delivery-decrease-at-birth-fracture.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.