Monobloc Le Fort III distraction osteogenesis allows superior skeletal advancement in treating severe syndromic craniosynostosis. We report a rare orbital complication in a 3-year-old boy with Crouzon syndrome who developed right-eye exodeviation with limited abduction during the intradistraction period following this surgery. Images from a computed tomography scan confirmed direct impingement of the distracted right lateral orbital wall to the lateral rectus muscle. The impingement was surgically relieved via lateral orbital wall osteotomy. Ten months postdistraction, a review showed normal eye movement. A lateral orbital osteotomy cut for a monobloc Le Fort III distraction should be designed near the rim to prevent this complication.