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C11-oxy C₁₉ and C11-oxy C₂₁ steroids in neonates: UPC²-MS/MS quantification of plasma 11 β -hydroxyandrostenedione, 11-ketotestosterone and 11-ketoprogesterone.

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Abstract

The purpose of this study was to identify the C11-oxy C₁₉ and C11-oxy C₂₁ steroids in male and female neonate plasma. At birth, the most abundant C11-oxy steroids detected in neonatal plasma were 11 β -hydroxyandrostenedione, ~13 nM, and 11-ketoprogesterone, ~23 nM. C11-oxy C₁₉ steroids were higher than C₁₉ steroids in neonatal plasma, 22.2 nM vs 5.4 nM. The inclusion of C11-oxy C₁₉ and C₂₁ steroid reference ranges in routine steroid analyses will assist the characterization of disorders associated with impaired steroidogenic enzyme expression and the identification of potential biomarkers.

1. Introduction

Steroid hormone reference ranges enable clinicians to identify abnormal levels characteristic of disorders in newborns, in order to determine relevant management. Currently, advances in

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