

CASE REPORT

Bilateral Congenital Dacryocystoceles: HDlive Silhouette Image

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ABSTRACT

HDlive Silhouette can demonstrate inner echo-free structures of the fetal body. In our case, this technique clearly showed fetal bilateral dacryocystoceles just below the medial canthal area under the orbits at 28 weeks and 3 days of gestation. We could clearly identify spatial relationships between the mouth, nose, orbits, and dacryocystoceles. These dacryocystoceles became obscure with advancing gestation. HDlive Silhouette may be a useful diagnostic technique for evaluating inner echo-free structures in fetal orbital regions.

Keywords: Antenatal diagnosis, Bilateral congenital dacryocystoceles, HDlive Silhouette, HDlive Studio.

Donald School Journal of Ultrasound in Obstetrics and Gynecology (2020): 10.5005/jp-journals-10009-1665

INTRODUCTION

The overall incidence of fetal dacryocystocele is 0.016–0.43%.^{1,2} The rare combination of an imperforate membrane of Hasner and malfunction of Rosenmüller's valve is the main cause.³ Most cases of congenital dacryocystocele resolve spontaneously before birth or just after delivery.^{2,4} Two-dimensional (2D) sonographic characteristics of fetal dacryocystocele are uni- or bilateral hypoechoic, periorbital, and round masses.⁴ Three-dimensional (3D) surface-rendering imaging showed swelling below the medial canthal area.^{4–10} There has been only one report on HDlive Silhouette diagnosis of unilateral congenital dacryocystocele.¹¹ However, the whole face view was not shown in that study. In the current study, we present HDlive Silhouette diagnosis of bilateral congenital dacryocystoceles in a fetus at 28 weeks and 3 days of gestation.

CASE DESCRIPTION

A 37-year-old pregnant Japanese woman, gravida 1, para 0, received routine third-trimester ultrasound screening at 28 weeks and 3 days of gestation. Two-dimensional sonography showed bilateral round cysts in the lower and medial areas of the orbits (Fig. 1). HDlive Studio revealed a small dimple in the lower and medial area of the right orbit and swelling below the left medial canthal area (Fig. 2). HDlive Silhouette (Voluson E10 BT20, GE Healthcare Japan, Tokyo, Japan) clearly showed fetal bilateral dacryocystoceles just below the medial canthal area under the orbits (Fig. 3). Fetal biometry was normal, and there was no other abnormality. These dacryocystoceles became obscure with advancing gestation.

At 40 weeks and 4 days of gestation, an emergency cesarean section was performed due to delivery arrest, resulting in a viable, single male newborn weighing 3,520 g, with a height of 52 cm. The Apgar scores were 9 (1 minute) and 10 (5 minutes), and the umbilical artery blood pH was 7.28. The pediatric examination showed no newborn facial abnormalities (Fig. 4). The mother and neonate both followed a favorable course after the delivery.

DISCUSSION

HDlive Silhouette can demonstrate inner echo-free structures of the fetal body.^{12–15} In our previous report,¹¹ HDlive Silhouette showed

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How to cite this article: Hata T, Bouno S, Koyanagi A, et al. Bilateral Congenital Dacryocystoceles: HDlive Silhouette Image. *Donald School J Ultrasound Obstet Gynecol* 2020;14(4):349–350.

Source of support: Nil

Conflict of interest: None

spatial relationships among the dacryocystocele, lens, eyeball, and optic nerve. However, a clear image of the whole fetal face could

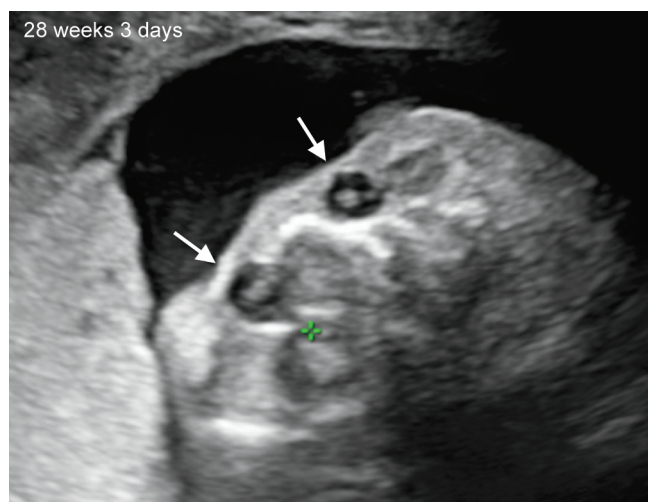


Fig. 1: Two-dimensional sonographic images of bilateral congenital dacryocystoceles (arrows) at 28 weeks and 3 days of gestation



Fig. 2: HDlive Studio images of bilateral congenital dacryocystoceles (arrows) at 28 weeks and 3 days of gestation

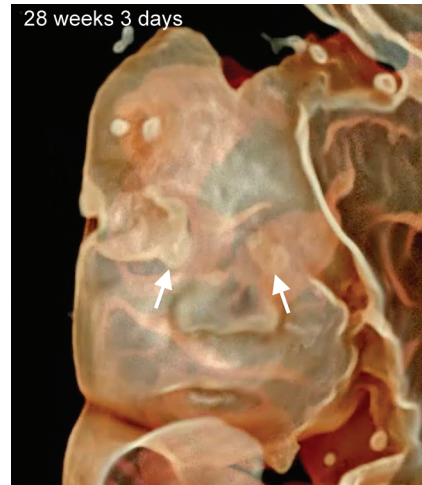


Fig. 3: HDlive Silhouette image of bilateral congenital dacryocystoceles (arrows) at 28 weeks and 3 days of gestation



Fig. 4: Neonatal face just after delivery

not be observed. In the current investigation, a good quality image of the whole fetal face could be obtained, and the true shape and exact location of bilateral dacryocystoceles were noted. Moreover, assessment of spatial relationships between the mouth, nose, orbits, and dacryocystoceles, and delineation of their contours enabled the location of the lesions to be assessed. HDlive Silhouette may be a useful diagnostic technique for evaluating inner echo-free structures in fetal orbital regions.

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