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Prenatal ultrasound of the Phrygian cap gallbladder: evidence for a deformation sequence.

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Introduction

The **Phrygian cap**, defined as folding of the gallbladder fundus over its body, is the most common anatomical variant of the gallbladder in adults, but **prenatal recognition** remains **uncommon**.

It has been **hypothesized** to represent a deformation related to **excessive** longitudinal gallbladder **growth** rather than a primary malformation.

Conclusions

These findings suggest a **morphologic continuum ranging** from normal-length elongated gallbladder to excessive elongation with secondary deformation and fundal folding. This supports the hypothesis that the **Phrygian cap** represents a deformation related to **excessive longitudinal growth** rather than a primary malformation. Recognition of this benign variant is important to avoid misinterpretation as a pathological cystic lesion of the fetal upper abdomen.

Two fetal cases in 3rd trimester

Case 1. In one fetus at 29 weeks, the gallbladder measured 24 mm, within **normal limits** for gestational age, and demonstrated marked elongation with an **L-shaped** configuration without fundal folding (Figure A,B).

Case 2. In a second fetus at 32+3 weeks, the gallbladder measured approximately 40 mm, **exceeding the 90th centile** for gestational age, and showed folding of the fundus over the body, consistent with a typical **Phrygian cap** (Figure C,D).

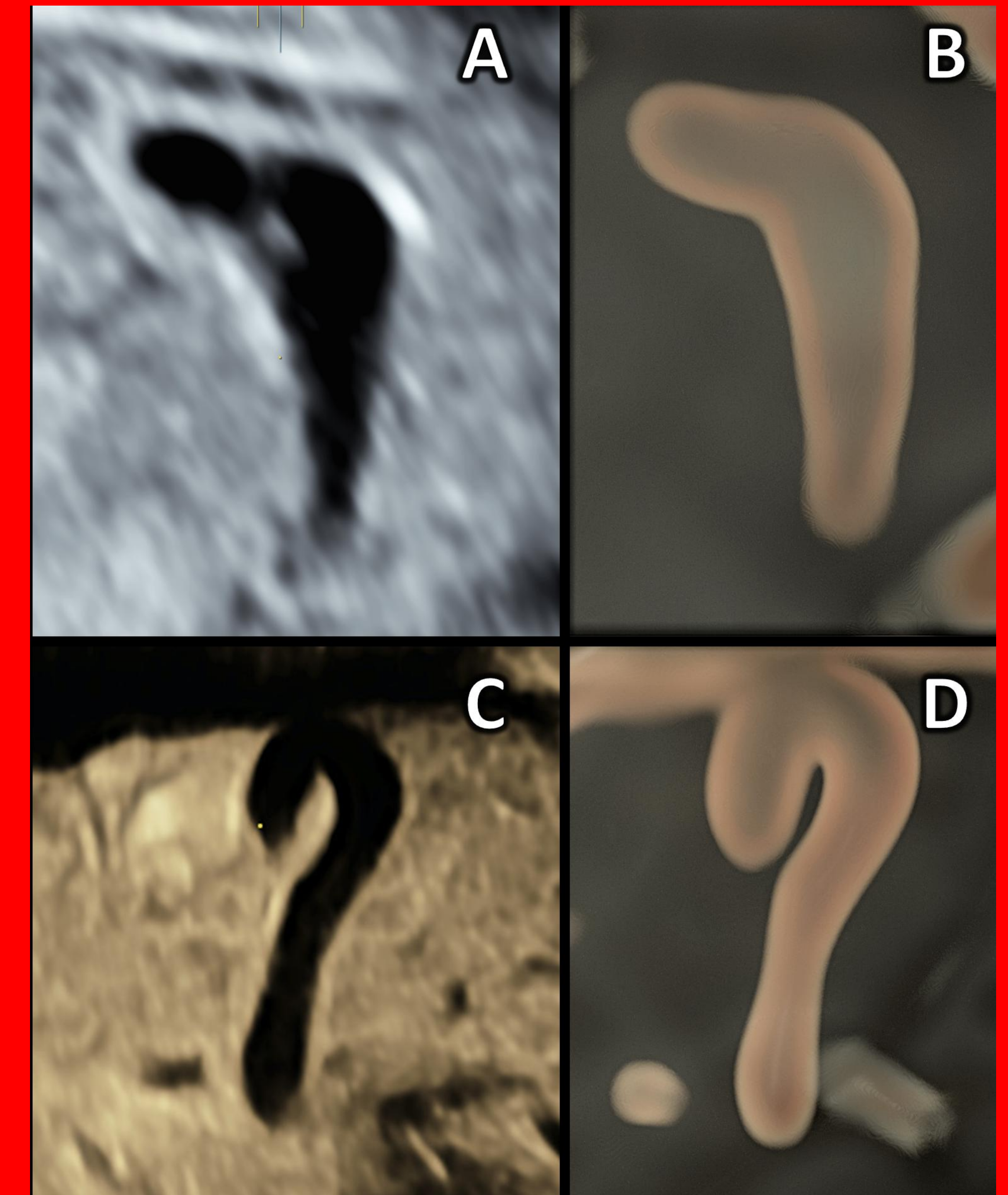


Figure 1. Continuum of fetal gallbladder morphology. (A,B) L-shaped gallbladder without fundal folding (2D and 3D). (C,D) Phrygian cap gallbladder with fundal folding (2D and 3D).