

EP 05-04 - Can all characteristics of fetal cranium and face of fetuses with craniosynostosis be segmented I 3D from fetal MRI images?

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Objective:

To access whether, in cases of prenatal diagnosis of craniosynostosis, 3D segmentation of fetal MRI images can demonstrate the primary characteristics of the malformation in face and skull.

Methods:

The fetal head and face images of five fetuses with craniosynostosis were manually segmented manually to demonstrate the main phenotypical characteristics of the malformation.

Results:

All five case of fetuses with craniosynostosis were successfully segmented. In each case, the superficial facial characteristics including eyes, nose, lips and their relationship with the face, (proportion and position) were demonstrated. However, other structures as palate, frontal bones, fontanelles and maxillary bones could not be properly segmented.

Conclusion:

The main phenotypical characteristics of fetuses with craniosynostosis can be demonstrated by 3D segmentation of fetal MRI images. However, cranial structures as frontal bones, fontanelles, palate and maxilla bones cannot be properly segmented.

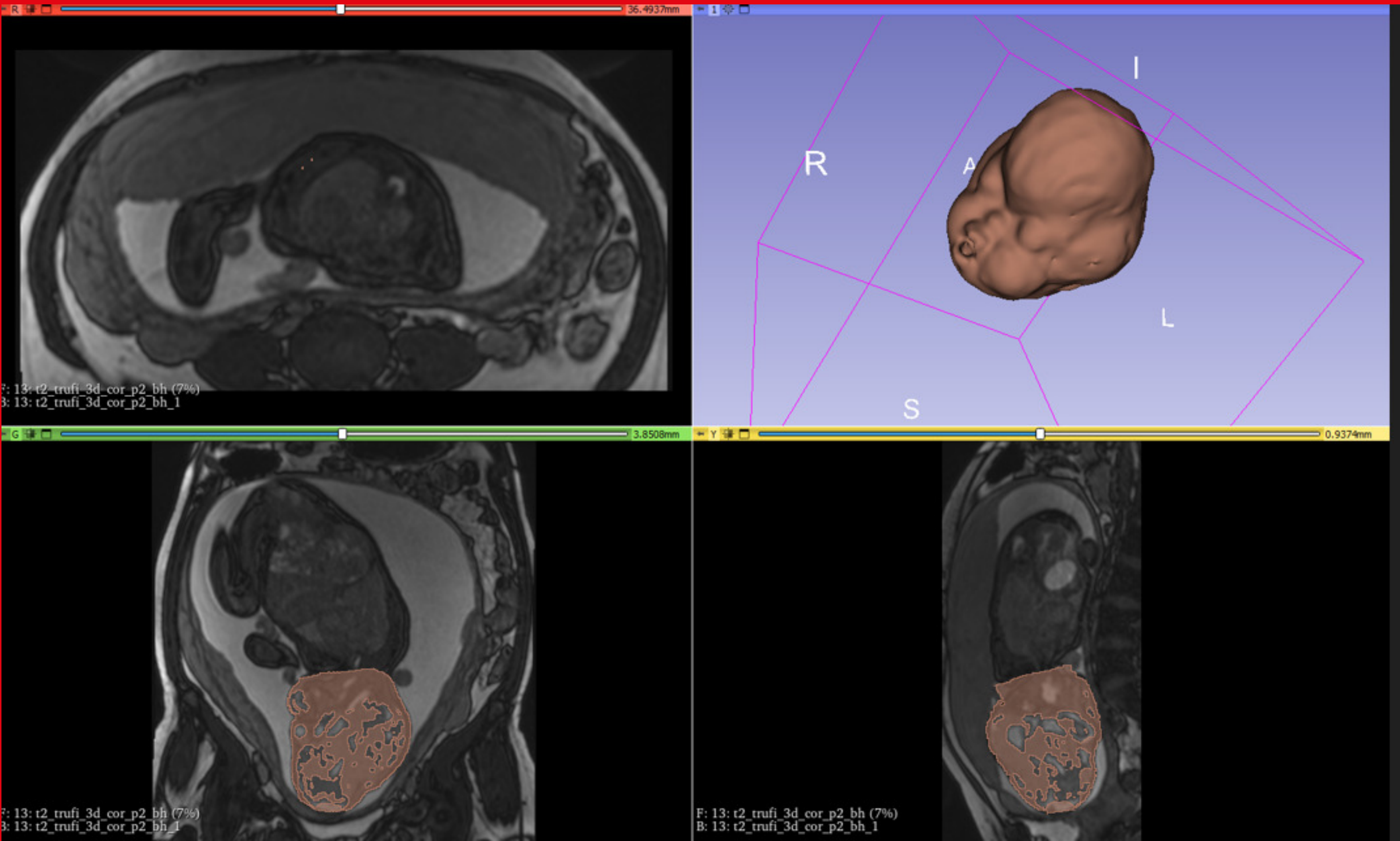


Figure The uterine cervix sectioned by traditional microscopy and microtomography:

