

Development of the human epiglottal epithelium *in situ*

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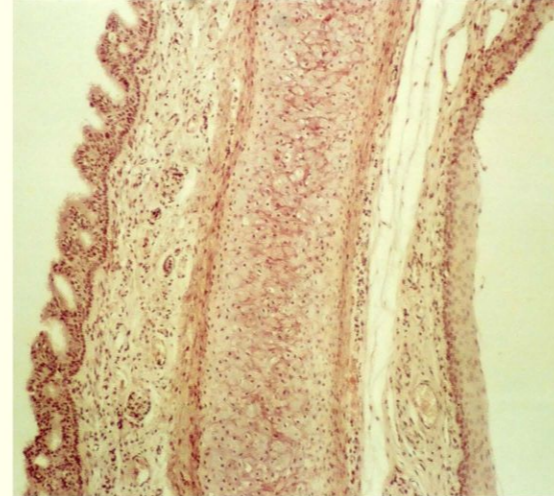
INTRODUCTION

Our previous results have shown that human epiglottal epithelium changes during development, from single-layered squamous epithelium in the 6-week-old embryo to two-layered cuboidal epithelium in the early 8-week-old embryo, in the newborn pseudostratified epithelium with goblet cells predominates and after the air-flow is established, stratified squamous epithelium predominates (Juric-Lekic et al.2008). 7-weeks-old and 9-weeks-old embryo epiglottal epithelium was now analyzed in more detail and compared

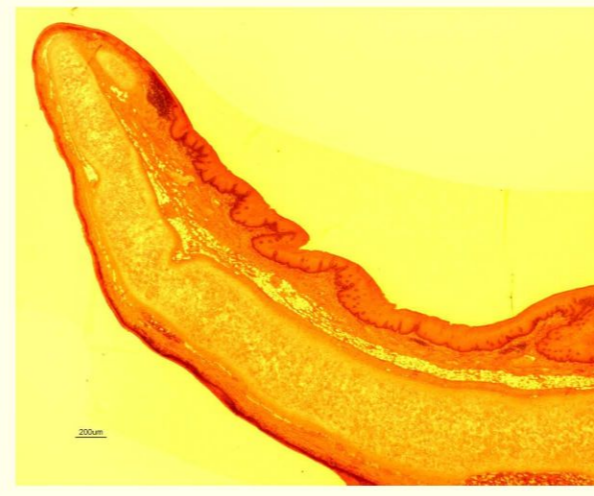
Jurić-Lekić, Gordana and Radujković, Vedran and Kancijan, Valentina and Bulić-Jakuš, Floriana and Lokošek, Vedran and Katušić, Ana and Vlahović, Maja and Šerman, Ljiljana. *Differentiation of epiglottal epithelia during prenatal and postnatal human development*. Collegium antropologicum, 32, 1115-1120, 2008.

MATERIAL AND METHODS

Embryos from the celoidine (1947) and paraffin collection of human embryos belonging to the Archive of the Department of Histology and Embryology were stained by HE, Azan, Masson trichrome stain, Verhoeff iron hematoxylin and PAF-Halmi. Epiglottal epithelia were investigated by light microscopy.



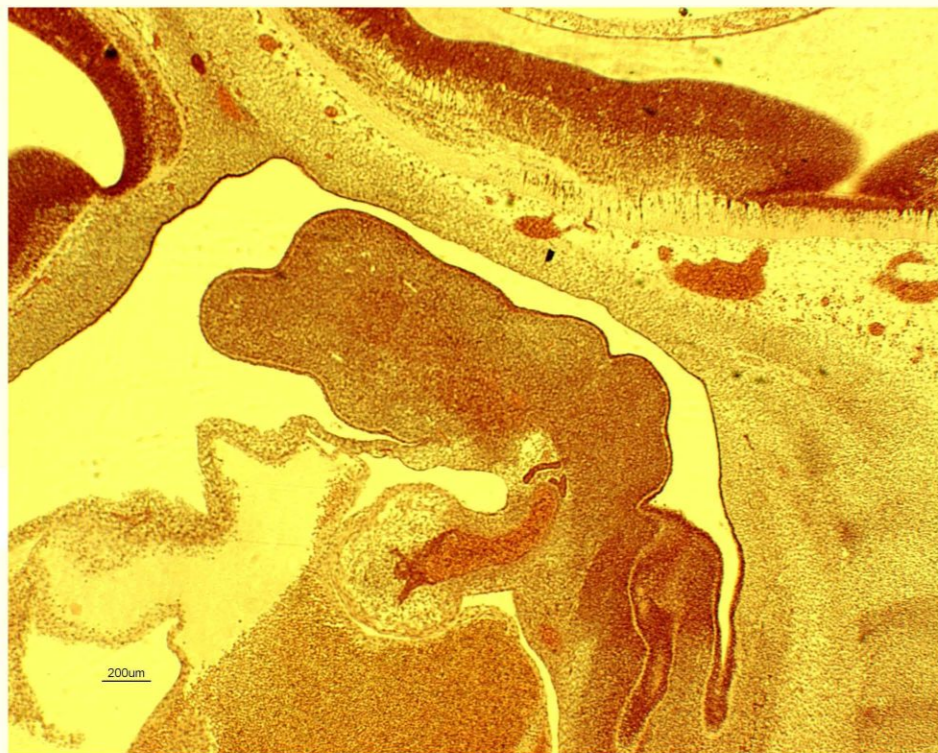
Newborn epiglottis, orcein x40



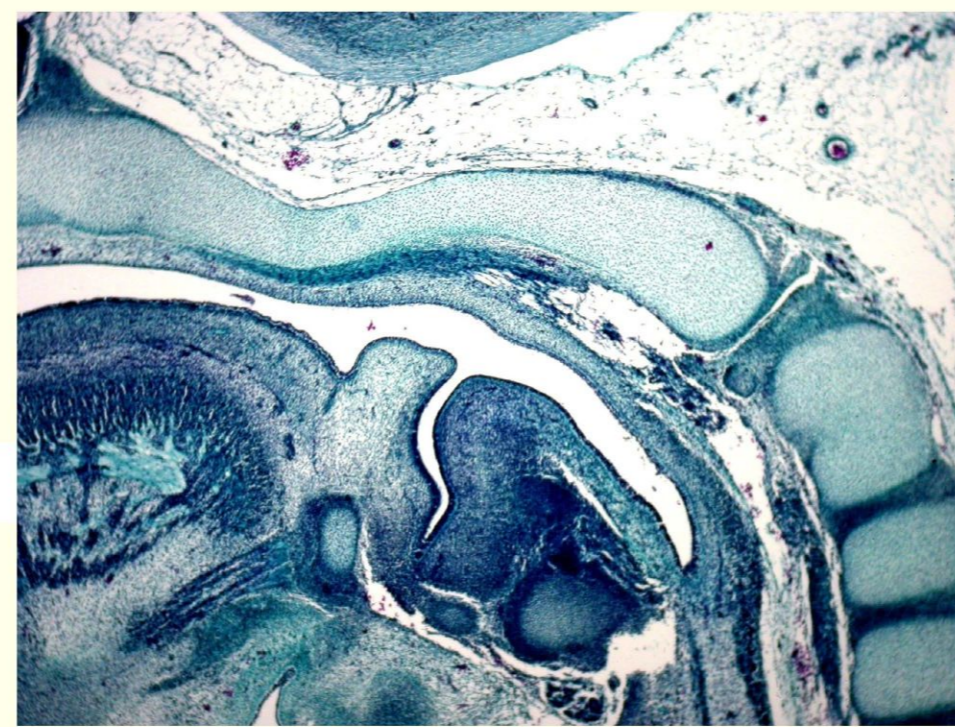
Adult epiglottis, HE x20

RESULTS

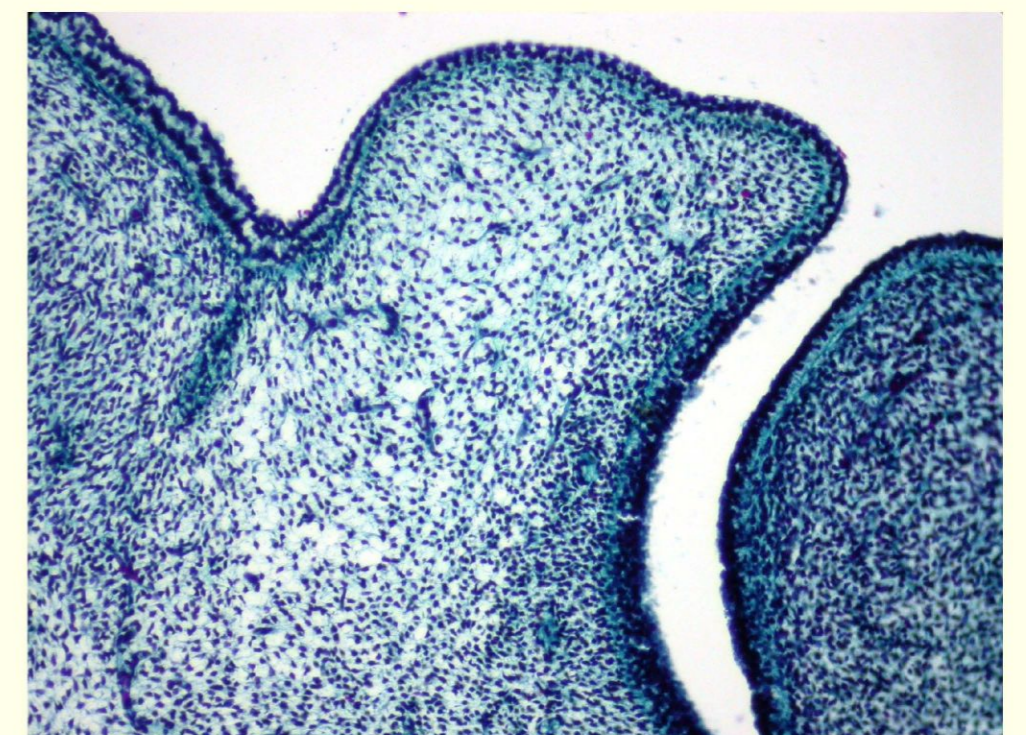
In the 6-weeks-old embryo epiglottal swelling (not yet detached from the tongue) was covered by a single layer of cuboidal cells. In the 7-week-old embryo, two-layered cuboidal epithelium was discovered. In the 9-week-old fetus epiglottal epithelium was multilayered columnar without cilia and goblet cells. It has been now confirmed that single-layered epiglottal epithelium has changed to the two-layered epithelium already in the 7-weeks-old embryo.



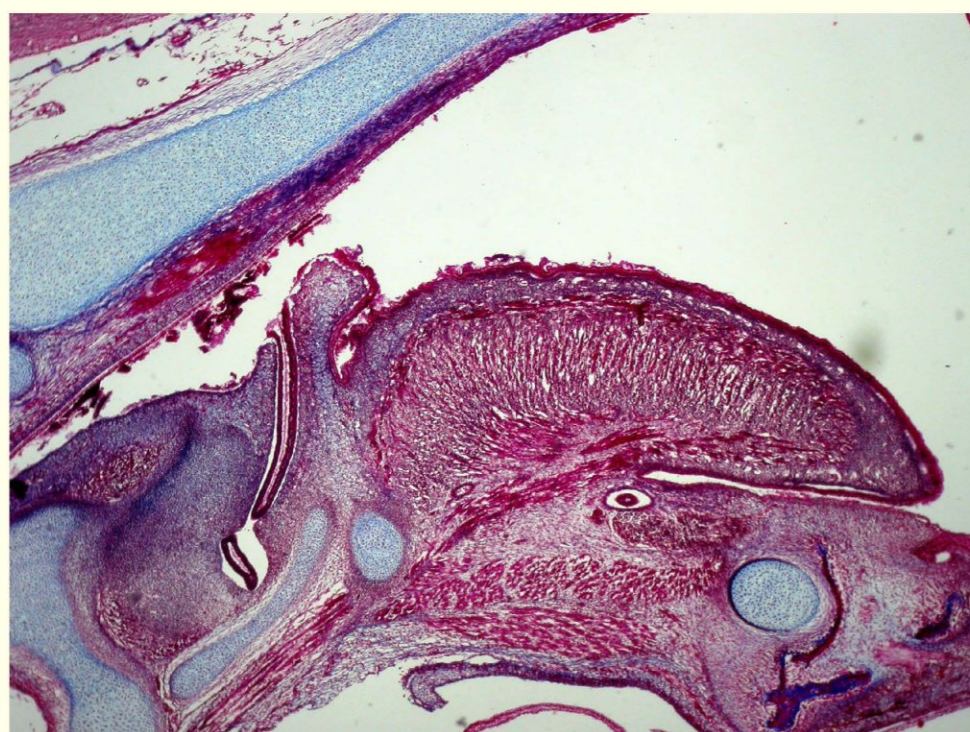
6-weeks-old embryo, HE X40



7-weeks-old embryo, Masson X40



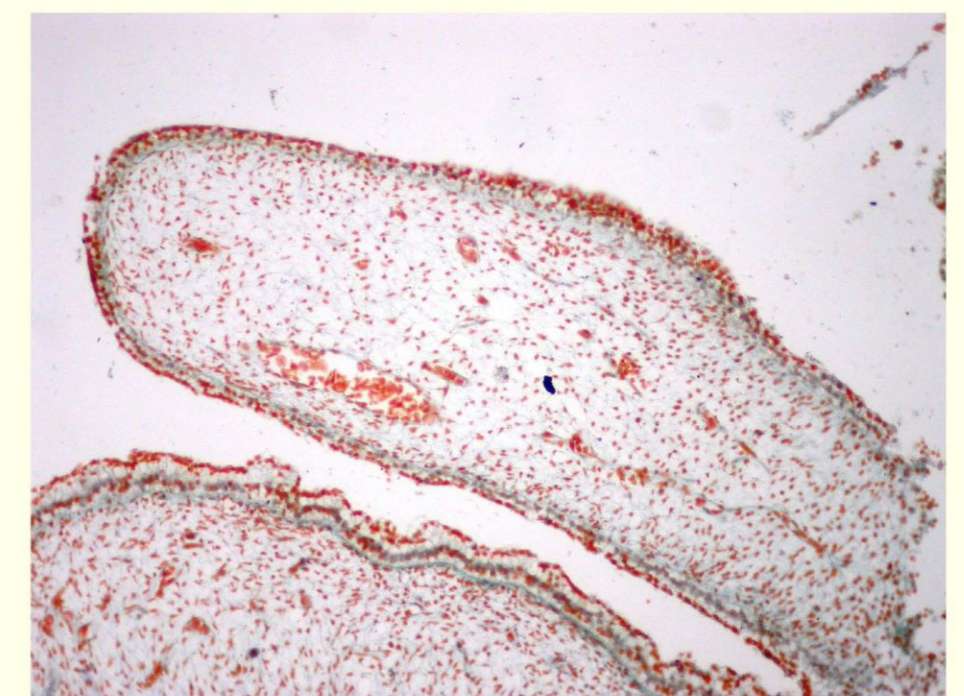
7-weeks-old embryo, Masson X200



9-weeks-old embryo, Azan X40



9-weeks-old embryo, Azan X100



9-weeks-old embryo, PAF Halmi X200

CONCLUSION

Developmental study such as this might be of importance for tissue engineering purposes.