

Application of Duracryl® Plus in Making of Corrosion Casts for Macro- and Microscopical Studies of the Renal Vasculature and Collecting System in Domestic Swine

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The lack of more concrete data about application of the acrylic resin Duracryl® Plus in making corrosion casts of renal blood vessels and collecting system motivated us to undergo undertake this study. We aimed to perform modified technique for making corrosion casts for 3-dimensional (3D) studies of the kidney blood vessels and collecting system and for replicating microvasculature using Duracryl. As a result, corrosion casts of the whole renal arterial network including glomeruli were obtained. The number of cortical glomeruli in kidney, which arteries were injected with casting media with dilution of 1:2, was significantly smaller than the dilution of 1:5. With regard to collecting system, the lower dilution of casting media allowed the filling of small calices while the media with a higher dilution – the collecting tubules system of the renal medulla and even of the cortex.

In conclusion, we found that the Duracryl is suitable for making three-dimensional casts of the renal arteries and collecting tubules and also microvascular corrosion casts for stereomicroscopy and scanning electron microscopy.

Key words: Duracryl® Plus, corrosion casts, kidney.