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Experience with the equine Matrix patch in different congenital applications

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Congenital applications

Right atrial side
Right ventricular side
Pulmonary arteries

Left atrial side
Left ventricular side
Aorta
Superior and inferior vena cava



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Congenital applications

Right atrial side

- sin. ven. defect both as patch and enlargement of SVC
-ASD closure (both ASD II and part AV-can)
-replacement of atrial wall (tumor or double switch)
-replacement of tricuspid valve



Congenital applications

Right ventricular side

RVOT enlargement

trans annular patch

Ross Konno operation



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Congenital applications

Pulmonary arteries

PA stem enlargement

pulmonary arteries enlargements and replacement

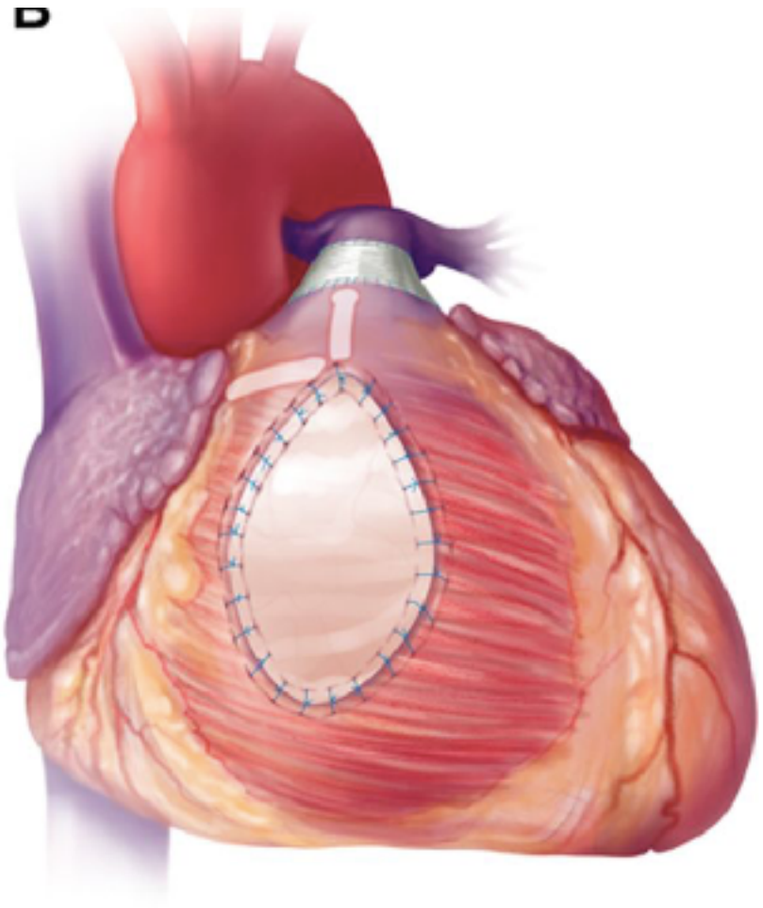
mono cusp application

most often used in my practice

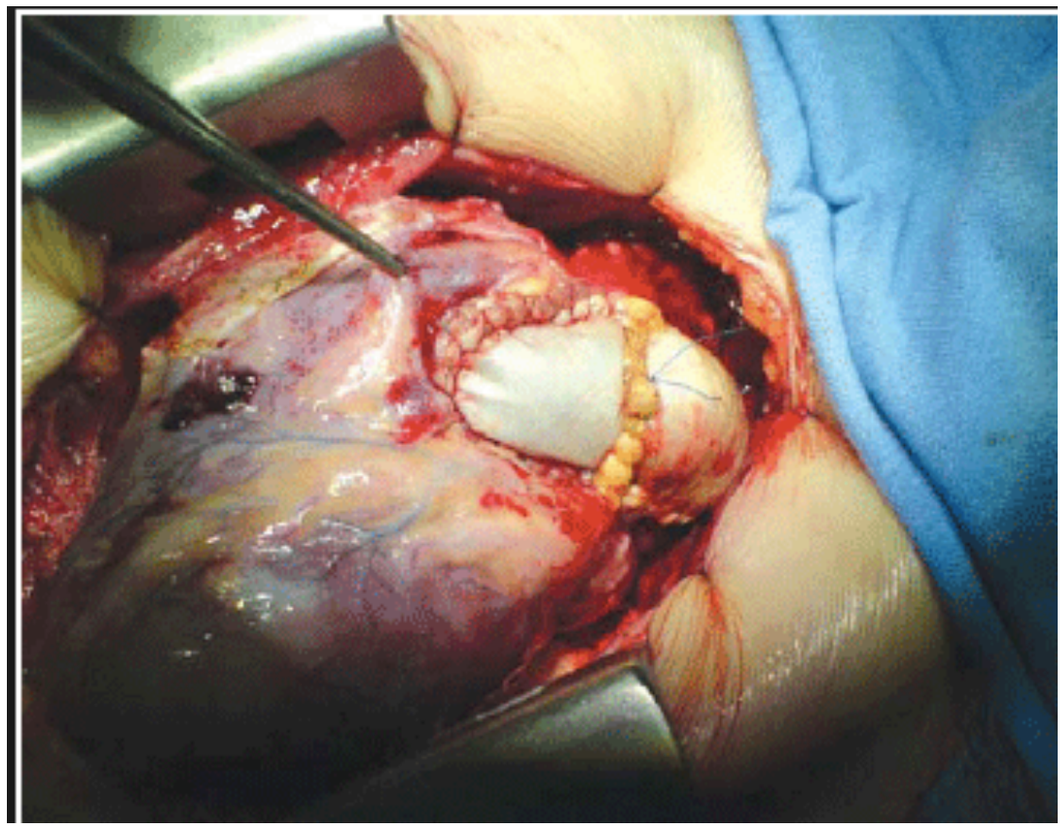
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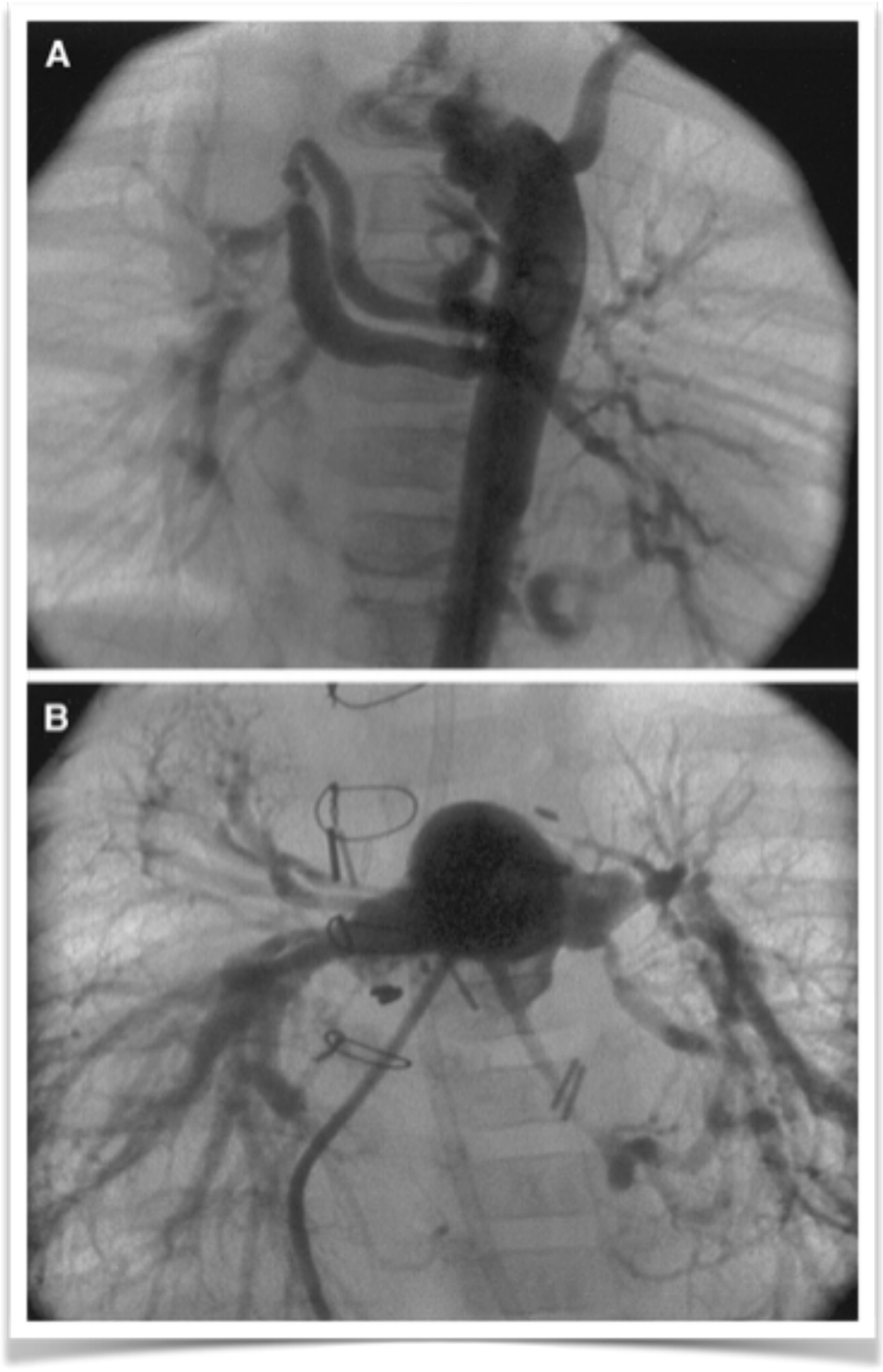
Right Ventricle



RVOT patch



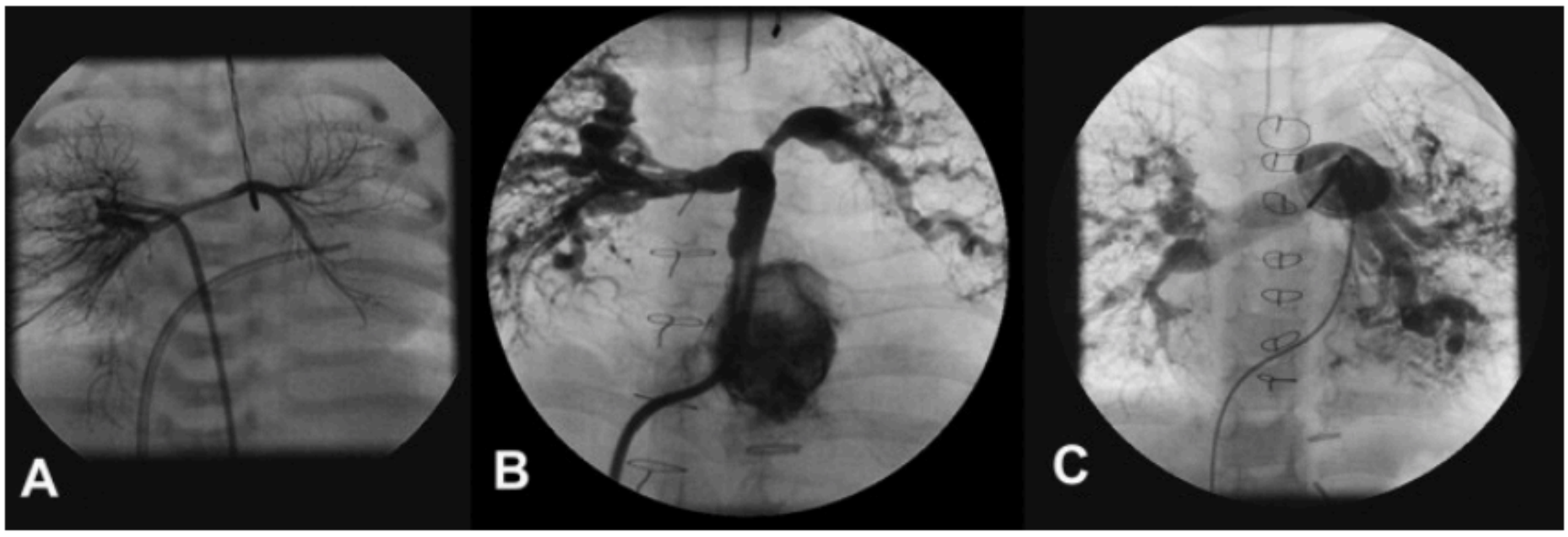
Matrix extension in Ross operation

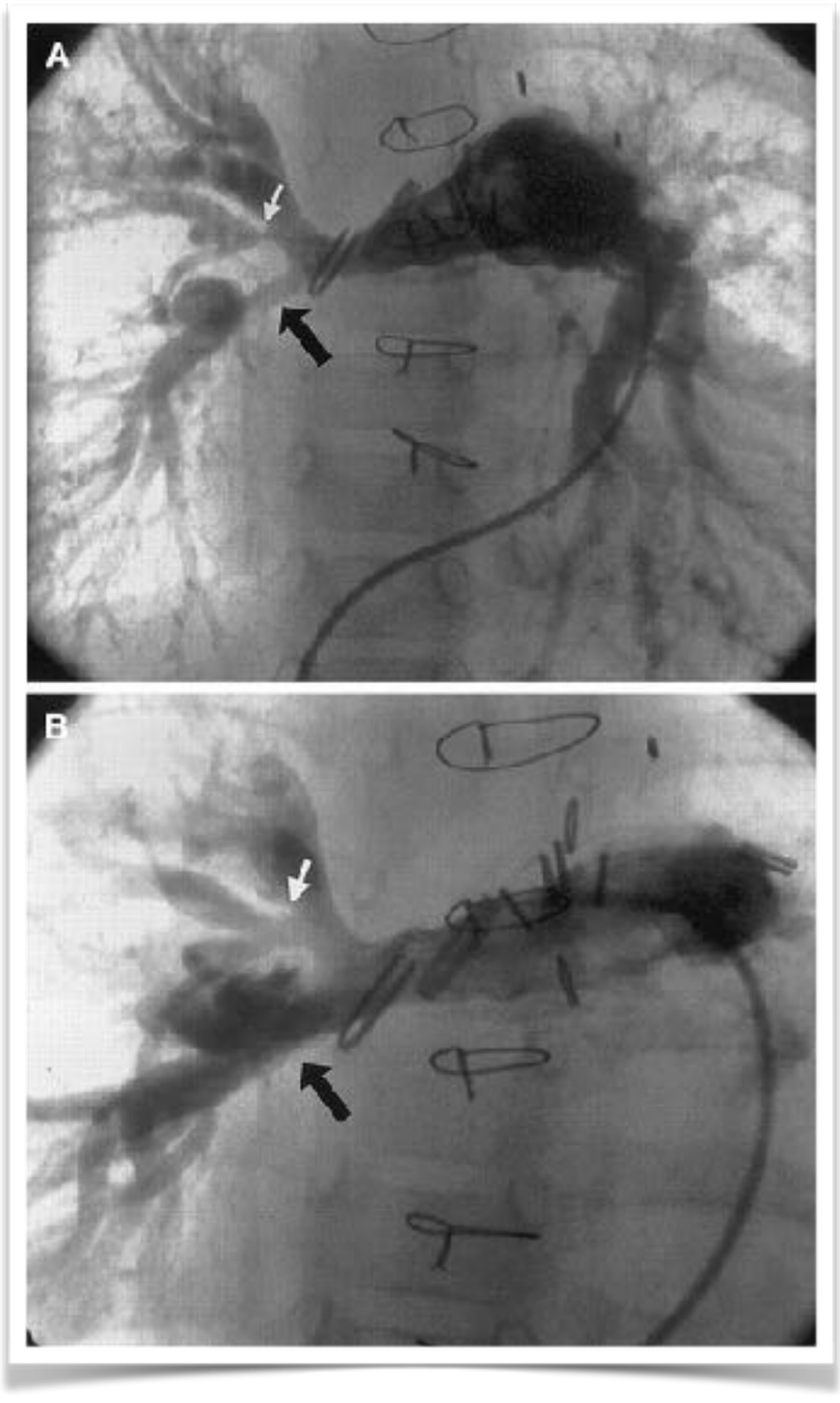


No confluent system, just collaterals

Unifocalized with RV-PA conduit

Diminutive confluent system grown with shunt
and RV-PA conduit





After growth interventional
“attacking” of peripheral stenosis



Congenital applications

Left atrial side

use in mitral valve reconstruction

mainly re-do surgery tapvr correction

enlargement pulmonary venous side



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Congenital applications

Left ventricular side

VSD closure eg large patch DORV+TGA re-routing with large patch

(even though patch feels very thin, extremely strong to resist high pressure differences)



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Congenital applications

Aorta

aortic valve reconstructions

Norwood operations

Coarctations or arch enlargements

Ascending aortic stenosis



Congenital applications

Superior and inferior vena cava

Repair of stenosis or enlargement either in superior or inferior cava

Replacement of innominate vein



Congenital applications

Results

Several hundreds of implants; no patch complications

Removal of around 3-5 patches (PA: no calcifications and no thickening)



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Advantages	Disadvantages
readily available	too “floppy”
non thrombogenic	costs?
ease of handling	calcification?
patch longevity	
dilatable in future	



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Take home message

Matrix patch ideal material for left and right side

Personally, I have not seen calcification in this material

Pediatric cardiology loves the interventional possibility

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The behaviour of the doctor





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Thank you for your attention

