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**Biodegradable metal stents in congenital heart diseases - a bail-out or a bridging solution?**

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Background: Bioabsorbable magnesium scaffolds (MgS) have been shown to be effective in the adult coronary system. We analyzed their role in the treatment of vascular stenosis in children.

Method: Since 2016 fifteen MgS with a diameter of 3.5 mm were implanted in 9 infants and children aged 15 days to 7.6 years. Eight MgS were implanted in pulmonary venous re-stenoses (PVS), five in pulmonary arterial stenosis including one in-stent stenosis, one into a stenotic brachio-cephalic artery and one in a recurrent innominate vein thrombosis.

Results: All patients clinically improved after the implantation of a MgS. The MgS began to lose integrity at 4 to 6 weeks after implantation. The innominate vein thrombosed early, while all other vessels remained open. Two patients died after 4 and 12 weeks not related to the MgS. Re-stenoses of up to 50% diameter reduction occurred in the group with PVS and between 0% and 20% in the other lesions. Four patients received further interventions after the MgS had lost their function and redilations with larger balloon diameters of up to 6 mm were performed to follow growth. The rapamycin coverage of the MgS did not cause noticeable side effects.

Conclusion: The MgS can be used as a bridging solution to treat severe vascular stenosis in newborns and infants in different lesions. Restenosis can occur after degradation, but neither vessel growth nor further interventions are hindered by stent material. Larger diameters and prolonged degradation time may improve therapeutic options.