

Affordable flow diverter stent in the offing

New Delhi, Jan 19 (India Science Wire): In a boon to aneurysm patients at the risk of stroke in the brain, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram, and National Aerospace Laboratories of CSIR (CSIR-NAL) have developed an indigenous flow diverter stent that is easily affordable than the imported ones.

The braided design of kink-resistant stent, made of superelastic Nickel-Titanium alloy, can withstand twists and turns of complex artery system without losing grip or shape. The metal mesh is radio-opaque which means better visibility for accurate placing of the stent in the blood vessel.

It works on the principle of lowering the blood pressure in the aneurysm by diverting the flow of blood supply away from the weak artery wall which could rupture and cause stroke, leading to coma, disability or death within 24 hours.

This stent has an advantage over the coil or glue system as the diversion of blood pressure allows a weak artery wall to heal itself, which is not possible while remaining under constant pressure. Open skull surgery to cut off the dangerous flow is the last resort.

Imported stent costs anywhere between Rs 7 to 8 lakhs and the home-grown version will be cheaper, though no price has been announced officially, yet.

Arbitrary pricing of stents has been curbed by the government by bringing these under National List of Essential Medicines in 2017. National Pharmaceutical Pricing Authority (NPPA) has capped the price of a bare-metal stent at Rs 7260 and drug-eluting stent at Rs 29600.

Exorbitant costs of imported stents have often spelt whopping profits to suppliers' cartel and financial ruin to the families of needy patients.

The indigenous stent was developed in March last year. After successful animal and human trials, it is up for bulk production as the institute has entered into a technology transfer agreement with Pune based manufacturer Biorad Medisys. A patent is also underway.

An estimated 11 persons per one lakh population get aneurysm in India every year, accounting for some 1,40,000 cases a year. Stroke kills 40 percent of patients and leaves survivors severely debilitated and paralyzed. (India Science Wire)

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