

INA Shunt, Solution to Hydrocephalus

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The presence of shunting methods gives hope to people with hydrocephalus disease. Moreover, the use of this method is no longer dependent on imported products.

INA Shunt by Prof. Dr. Paulus Sudiharto, Sp.BS (K), a neurosurgeon at the Dr. Sardjito General Hospital, becomes a solution. Working with PT Gama Techno, the INA Shunt is mass produced and has been used in various hospitals across Indonesia.

"This is a semilunar slit valve system that is not only affordable, but also can reduce the level of risk in the treatment of hydrocephalus," said Sudiharto at the teleconference room, room of Neurosurgery Sardjito Hospital, Monday (8/8).

Sudiharto explained the only best way to treat hydrocephalus disease is surgery. Surgery can eliminate the excessive collection of cerebrospinal fluid within the skull. Operations are carried out by installing a pump and a special hose to drain the fluid.

In 2013, the number of patients with congenital hydrocephalus was in between 14,216 - 18,955 according to Ministry of Health. Of these numbers, the majority of patients came to the doctor when it was too late.

Sudiharto revealed, INA Shunt actually was patented in September 2009 after being developed since 1978. Up to now been it has been installed in 10 thousand patients with hydrocephalus.

"Varying ages with various causes such as birth defect, bleeding in the brain, infection, meningitis, tumor or head injury could lead to hydrocephalus. Many types of hydrocephalus are due to obstruction of cerebrospinal fluid in the ventricles (midbrain)," he said.

INA shunt is a tube which has a semilunar-shaped valves with anti-slip lump. Semilunar valve is mounted on the pump and the catheter serves as a channel for cerebrospinal fluid in patients.

"The advantage of this system is that it serves to prevent the liquid from going back into the cavity of the head and regulates the flow so it will not much affect the patient's activity. The anti-slip lump is meant to anticipate the danger of catheter to be sucked into the brain that can lead to death," said Sudiharto.

According to the man, INA Shunt is a secure system installed in infants from aged 10 days to adults with the condition of the patient in stable condition. Installation of pump system from the brain to the stomach can drain brain fluid volume by half.

"The tool is widely used in Medan, Bangka, Batam, and other cities, but the most widely used is in the Dr. Sardjito Hospital. And the price of INA Shunt is about 2 million, much cheaper than the products from abroad," said Sudiharto.

After reviewing some of hydrocephalus patients at the Dr. Sardjito hospital, Dra. Maura Linda Sitanggang, Ph.D, Director General of Pharmaceutical and Medical Devices in Ministry of Health, welcomed the presence of INA shunt for hydrocephalus patients. INA Shunt proved the innovation is based on the research collaboration between Dr. Sardjito Hospital, Gadjah Mada University and the medical devices industry.

"INA Shunt has already obtained distribution license from the Ministry of Health. Therefore, we strongly encourage all hospitals in Indonesia to use innovation product of medical devices such as this one," said Maura Linda.

She hoped this innovation will be followed by innovations in other medical devices for nearly 90 percent of medical equipment in Indonesia is still dependent on foreign countries.

"But with innovations from within the country, the health insurance program, there is a system for independent and accountable provision as electronic catalogs, all of those dependencies could be pushed away gradually," said Maura Linda.

Sang Kompiang Wirawan, ST, MT, Ph.D., Head of the Directorate of Business Development & Incubation Incubation of Universitas Gadjah Mada, said INA Shunt is evidence that research findings can be presented to society after going through several test phases. Therefore, the downstream process always expects the full support from the Director General for Strengthening Innovation in the Research, Technology and Higher Learning Ministry and the Department of Pharmaceutical and Medical Devices

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