

UGM Students Make Chicken Feet into Gel to Heal Broken Bone

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Universitas Gadjah Mada (UGM) students have made use of chicken feet waste as gel to cure broken bones.

The innovation was made by Yudith Violetta P (Veterinary), Vigha Ilmanafi A (Pharmacy) and Josi Aldo Pramono (Engineering), who use bone graft biomaterial in a nano-BCP-collagen gel from chicken feet.

Yudhit explained they developed the product following the increasing number of broken bone cases in Indonesia each year. Reportedly, in 2010 fracture incidence reached over 43,000. Fractured or broken bones will damage the bone tissue and the surrounding soft tissues and it takes a long time to heal.

She said in absolute fractured bones, the broken bones cannot be rejoined. So, implant as immobilisator is no longer effective. In this case, bone graft material that is more effective is required to replace the broken bone tissues and stimulate new tissues formation.

“This has encouraged us to make innovation and hence the nano-BCP-collagen gel, which derives from biological waste - chicken feet - that are abundant here,” said she on Monday (15/7).

Yudhit said BETAGRAFT in the gel form compared to conventional implant is more flexible because it can reach all fragments of the broken bones. The formulation contains BCP material in the form of nanocrystalline. It is also nano-metrically natural so it is absorbed quicker.

Vighna added they formulate the chicken feet taken from slaughter houses into gel for easy application. Later, they tested the gel on 2 months old wistar rats.

“Seen from the callus and histopathology as healing parameters, BETAGRAFT proved to expedite the fracture healing than conventional bone graft,” she said.

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