Comparative Analysis of the Mechanical Strength of Cerafix® Dura Substitute & DuraGen Plus™ Dural Regeneration Matrix

The mechanical properties of Cerafix® Dura Substitute, a fully synthetic and resorbable dura substitute composed of electrospun PGLA and PDO fibers, were compared to the mechanical properties of DuraGen Plus™ Dural Regeneration Matrix, a porous bovine collagen dura substitute. Despite similar indications for use, Cerafix® demonstrated superior mechanical properties when compared to DuraGen Plus™. The results of these comparative benchtop studies are outlined below.

**COMPARISON OF TENSILE STRENGTH**: Cerafix® demonstrates superior tensile strength compared to DuraGen Plus™. Cerafix® is highly resistant to tearing during placement and fixation, ensuring structural integrity while subjected to the forces encountered during application to a dural defect during closure.

**COMPARISON OF SUTURE PULLOUT STRENGTH**: Cerafix® demonstrates increased suture pullout strength compared to DuraGen Plus™. Cerafix® is ideally suited for use with interrupted tacking sutures, which eliminates risk of migration and provides added security during closure.

**COMPARISON OF BURST STRENGTH**: Cerafix® demonstrates greater burst strength compared to DuraGen Plus™. Cerafix® is designed to withstand intra-cranial pressures (ICP) upon closure of the dura mater, and does so for a longer amount of time than DuraGen Plus™, potentially decreasing the risk of CSF leaks related to ICP.

References: (1) EDS-50013, (2) EDS-60013, 67, 68