Sticky Stitchez

Elabiad, Ahmad (School: Pleasant View School)

Sticky Stitchez is an innovative project that deals with a detrimental problem in the medical field. In this project, I invented an item to combat the possibility of wound dehiscence and its negative effects on the human body that may develop from the use of sutures. This invention may surpass the capabilities that suturing and other stitching techniques like strips withhold. Followingly, I designed and invented 4 prototypes until the last prototype (prototype 4) was capable of achieving the same purpose of sutures without piercing the skin. The general idea is a bandage adhesive, cut-in-half, and a zip-tie superglued to each end. One side of the bandage would be placed on one edge of a potential cut/wound and the other side of the bandage would be placed on the other end. Afterwards, pulling and tightening the zip-tie would pull closer the edges of the cut, achieving the same function as sutures and/or strips. I tested each prototype 4 times on a modified suture pad (the same material real surgeons practice suturing). I tested the time it took for a prototype to loosen or dysfunction; Prototype 1 lasted an average of 1.34 seconds, Prototype 2 - 8.67 seconds, Prototype 3 - 66 seconds, and Prototype 4 is still lasting (to this point, it still has not loosened or dysfunctioned). In conclusion, my invention was able to achieve the same functionality as stitches and also surpass capabilities in contrast to two different stitching techniques; my invention may be better than sutures because it does not require skin-piercing which limits the possibility of wound dehiscence and/or any other fallacies. My invention may also be better than strips because while strips are applied to usually smaller cuts, my invention is applicable to larger cuts depending on the zip-tie length.

Awards Won: