

A REVIEW ON PROPERTIES OF SURGICAL SUTURES AND APPLICATIONS IN MEDICAL FIELD

SRINIVASULU K & N. DHIRAJ KUMAR

College of Technology, Osmania University, Hyderabad, Andhra Pradesh, India

ABSTRACT

The purpose of the study was to provide detailed information on properties of suture materials in order to assist surgeons in their selection of adequate sutures for specific surgical applications. The essential requirements and characteristics of suturing materials effects on properties of surgical sutures. A wide range of stress-strain characteristics was observed in the tested sutures. Suture materials of similar nominal properties may behave quite differently in their stress-strain relationship. Sutures are classified into three classes according to its structural configuration and origin. These are classified by the Food and Drug Administration (FDA) with reference to Safe Medical Device Act (SMDA), and Food and Drug Administration Modernization Act (FDAMA) of USA. Absorbable suture is used to close the edges of a wound or incision and to repair damaged tissue. Non-absorbable sutures are designed to either be left permanently in the body or are to be removed after a certain healing period. This was true of sutures of the same chemical nature as well as of different geometric construction, such as Ethilon vs. Nurolon.

KEYWORDS: Fibre, Suture, Human Tissue, Synthetic, Bio-Degradable, Mono-Filament