CONSEQUENCES TO SEROUS INJURY
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Serious injury can be defined as that which results in death instantaneously (peracute), within a short period (acute), or over time (chronic) or in significant debilitation that affects feeding, mobility, or reproduction. For marine mammals, sources of injury include gunshot/projectiles/arrows, entanglements and ingestions, and sharp and blunt force trauma. While these injuries may have grossly observable changes such as lacerations, amputations, and haemorrhage, internal changes may be less evident and could be of incredible significance to survival. Pathologic consequences of injury fall into two categories-anatomic, i.e. location of injury and physiologic. The anatomic location of an injury could lead to peracute to acute death (ex. head trauma) or chronic debilitation (ex. fracture of mandible and starvation). Physiologic consequences of injury include shock, pain, or blood loss leading to an inflammatory cascade, activation of the sympathetic nervous system, hormone release (epinephrine and norepinepherine) and vascular changes with potential end results of hypothermia, coagulation defects, organ failure, and death. However, these may not be readily determinable in an animal surviving a traumatic event, and in animals that die, tissue autolysis or loss may prevent a complete assessment. Factoring into all of this are the signalment (species, gender, age class) and history (nutritional status (body condition), reproductive status, and natural history (indigenous, migratory), pre-existing disease states) that may adversely affect healing or ability to avoid an insult. If the source of trauma and animal factors are considered, then these could provide components of a categorization of injury and possible response to injury (Figure 1) similar to human traumatic insult categorization.