ABSTRACT The pitfalls in managing caustic injury

Patients with caustic injuries comprise a wide range of severity including children with unintentional ingestions who can often be discharged after a brief assessment and patients with lethal injuries to their gastrointestinal track. During the assessment and management phase there are many potential areas for error, that when recognized can be avoided to improve patient care. This lecture discusses some of the most common pitfalls in caustic injury. Items discuss include:

While it is generally true that caustics with extremes of pH (less than 2 or greater than 13) are associated with injury it is untrue that that substances with less severe pHs are relatively benign. Typical exceptions to this rule are ammonium hydroxide and zinc chloride. It seems as though the amount of acid or base that the tissue needs to donate to neutralize the caustic is as important or more so in some cases than the absolute pH.(1, 2) Another pitfall especially in children is a reliance on the physical examination to include or exclude injury to the gastrointestinal tract. In children the absence of any injury to the checks, lips or oropharynx is NOT a good marker of the absence of injury to the esophagus or stomach. Additionally, abnormal findings are not good markers of gastrointestinal injury because of small volume ingestions, hand to mouth behavior, and sometimes liquids are spit out.(3) in contrast when adults with intentional ingestions have visible lesions in their mouths the usually have severe gastrointestinal injury. (4) Finally there is a significant controversy over the role of endoscopy vs CT scan. Surgeons argue that the CT scan is sufficient in that their primary focus is whether or not an operative intervention is required.(5) However, endoscopy provides critical information about the status of the luminal side of esophagus(6) and more specifically identifies those patients who qualify for corticosteroid administration which seems beneficial in select cases.(4, 7)



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腐蝕性灼傷的嚴重程度不一,包括意外、少量口服暴露腐蝕性物質的兒 童,通常可在簡單的評估後出院;也可能因嚴重暴露腐蝕性物質,而導 致腸胃道灼傷致死的案例。在評估與處置的過程潛藏許多可能的錯誤, 這次的演講主題會跟大家討論處置腐蝕性灼傷常見易犯的錯誤。我們可 以透過認識這些情境,來改善對病人的照護。討論的主題包括:

(一)通常我們認為PH<2的強酸物質、或PH>13的強鹼物質暴露會造成嚴 重的腐蝕性傷害;但也並非僅考量PH值,而認為PH 2~13的物質較不危 險。氫氧化銨(ammonium hydroxide)以及氯化鋅(zinc chloride)就是典型 的例子。在考慮腐蝕性物質造成的傷害時,需評估組織對於酸鹼中和產 生的傷害,並非僅單純考慮PH值。

(二)另外可能會導致錯誤的臨床情況,尤其是兒童暴露腐蝕性物質,在 身體評估時考慮腸胃道是否損傷的時機。兒童通常為意外誤食,故暴露 量小;但兒童的咬手行為可能會導致意外暴露的量增加,故即使口腔、 喉嚨沒有腐蝕性灼傷,不見得食道或胃沒有傷害。

(三)相反的,成人暴露腐蝕性物質常為刻意食用,若口腔、喉嚨有可見的腐蝕性傷害,食道或胃的傷害常會更嚴重。

(四)最後, 胃鏡以及電腦斷層的角色常是一個爭議點。外科醫師主張執行電腦斷層重要性較高,因可直接判斷是否需手術介入。然而, 胃鏡能直接評估食道壁的損傷程度,並可依損傷程度評估是否需要使用類固醇等輔助療法。