PEPTIC ULCER AND ANTACIDS

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Role of antacids in the treatment of peptic ulcer has remained controversial. The antacids bring about symptomatic relief and are of limited value (Doll, 1964) while others believe that antacids accelerate healing. Controlled randomised trials are essential to determine the efficacy of antacids in healing the peptic ulcer, as car-benoxolone and cimetidine have been tested in this way and found effective (Doll et al., 1962; Black wood et al., 1976).

There is no doubt that acids play an important role in the aetiology of Duodenal ulcer (Wormsley, 1974) but not in gastric ulcer. Reflux of bile into the stomach probably causes mucosal damage which may be an important factor in the pathogenesis of gastric ulcer (Rhodes and Calcraft, 1973). A number of antacids are in common use but most of them contain Aluminium and Magnesium. Aluminium hydroxide not only neutralises gastric acid but also binds bile acid (Clain et al., 1977). Antacids used in the form of suspensions are found to be more effective than when used in tablet form (Isenberg, 1975). Silicone with its antifoaming effect when added to the commonly used antacids, does produce better symptomatic relief (Bernstein et al., 1974). Peppermint oil which is used to flavour the antacids, produces relaxation of the cardia and thereby facilitates eructation of gases and alleviate epigastric discomfort (Gunn, 1920; Sigmund and McNally, 1969). Alginates obtained from a species of sea weeds are soluble in alkaline hydroxides, but precipitate on contact with gastric acid and thereby form a sticky gel which adhere to the gastric mucosa and forms a protective layer.

Role of antacids in reducing gastric acidity is studied by many workers, and it is concluded that the amount of antacids required is much more than the dose commonly given. Actual dose of antacids should be calculated in the individual by titrating the gastric acid (Jones et al., 1977; Barry et al., 1978). Also the time of administration of antacids is very important. They are much more effective when given immediately after meals and also the duration of action is much longer (Deering and Malag-elada, 1977).

The part which antacids play in the healing of peptic ulcer is also disputed. Same amount of antacids used in a number of patients treated as in-patients and some as out-patients, it was found that healing was quicker in those treated as in-patients. This lead to the conclusion that it is the rest which plays an important role in the healing of peptic ulcer (Doll and Pygott, 1952). However antacids tried in patients with stress ulcers are found to be very effective in accelerating healing process and also reducing the complications like severe haemonhage (McAlbany et al., 1976).

Role of antacid in symptomatic relief of peptic ulcer is also a disputed matter. In some series it has produced relief while not in others. Hollander and Harlan (1973) in one series found calcium carbonate to be more effective than placebo in relieving symptoms of gastric ulcer in out-patients.

Antacids although commonly used are not without side effects. Calcium carbonate is well known for its role in milk alkali syndrome (McMillan and Freeman, 1965) which includes metabolic alkalosis, hypercalcinoses and hyperphosphatemia with hypokalaemia. Deterioration of renal function is not uncommon. Nephro-calcinosis is also seen.

Aluminium, Magnesium hydroxides reduces the absorption of drug like digoxin, tetracyclines and chlorpromazine and alters the excretion of anticoagulants and salicylates by altering urinary pH (Levy et al., 1975). Aluminium hydroxide produces hypophosphataemia and osteomalacia (Part et al., 1974), palatability is also an important consideration when large dosage regimen are used (Jones et al., 1977).

It is concluded that the role of antacids in the treatment of gastric ulcer is minimal. However in duodenal ulcer they are very effective if given in adequate doses and at proper time. Their results are comparable with cimetidine

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