

## Letter to Editor

### Use of oral enzyme preparations: Is there any evidence?

Sir,

Oral enzyme preparations such as Chymotrypsin and Serratiopeptidase are aggressively marketed in developing countries like India and are prescribed for a variety of indications such as facial oedema after trauma and surgery, parotitis, and carpal tunnel syndrome. It beats the common sense of any one that enzymes taken orally could be absorbed and reach its site of action intact and break-up the proteins in the oedema fluid. This thought had occurred to us during our training in India and our queries to several senior colleagues about the usage of these drugs were often met with answers such as 'I have seen it work', 'there is no harm in giving' and 'It must be useful, otherwise it will not be marketed for use'.

We came over to UK about two years ago and noticed that these drugs are hardly ever used here. There seemed to be no difference in immediate or long term outcome despite this fact and we were tempted to search for any evidence to support the use of oral enzyme preparations. We did an online literature search on MEDLINE and Cochrane Library. The search words used were *Serratiopeptidase*, *Serrapeptase*, *Chymotrypsin* and *Oral enzyme preparations*. A total of 192 articles were found including brief correspondences<sup>1</sup> animal studies<sup>2</sup> clinical trials<sup>4</sup> and double blind trials<sup>4</sup>. While some of the trials seem to show benefit of the drug over placebo

some others showed no difference. Even presuming that these preparations do have some action, there seems to be no plausible explanation for the mechanism of their transport across an intact gut mucosa. Even if these enzymes escape the onslaught of the digestive juices in the stomach and small intestine, the transport mechanisms for amino acids require these long chains to be broken down before they are transferred to the blood stream.

Practitioners of modern medicine do sometimes use alternative remedies such as the homoeopathic arnica with the rationale that they seem to have some action and do no harm. There seems to be more empiricism than science here and it also needs mention that these drugs are expensive and that most of the indications for their use are self-limiting conditions. It is also worrying that many of these multinational manufacturers target these products mostly towards countries like India where evidence based practice is yet to catch on.

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