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Book Review

Buccal and Nasal Administration as an Alternative to Parenteral Administration
D. Duchêne (Ed.)
Éditions de Santé, Paris, France, 1992, 332 pp.; ISBN: 2–86411–057–1.
Price FF 450.00.

This volume reports the proceedings of a symposium organised by the Association de Pharmacie Galénique Industrielle (APGI) and the Swedish Academy of Pharmaceutical Sciences which was held in Paris on 10th–11th December 1991.

The symposium demonstrated revived interest in nasal and buccal administration of drugs as an alternative to parenteral therapy. Plenary lectures were classified into six areas: Buccal and nasal administration routes; Mucus and mucociliary clearance; Pharmacology and toxicology; Dosage forms; Evaluation of buccal and nasal dosage forms; and Applications of buccal and nasal administration. These were followed by 15 contributed papers on various aspects of buccal and nasal absorption of medicaments, transport mechanisms across nasal mucosa, absorption enhancers, mucoadhesives, and aerosol inhalation.

In the first group of the plenary lectures, Ridley, Washington and Wilson, from Nottingham, discussed the buccal and nasal administration anatomy and physiology of the nose and buccal cavity; this was followed by Puchelle (Reims) who described the mucociliary clearance system. In the pharmacology and toxicology arena, Chien (New Jersey, USA) presented the physiological basis of buccal and nasal absorption, while Merkus and his colleagues from Leiden related aspects of buccal and nasal absorption enhancers. This was followed by tolerance investigation of medicinal products for nasal use by Streichenberger, Domage and Domage, from Paris.

The section on dosage forms was introduced by Kellaway and colleagues from Cardiff. They described the swelling, mucoadhesive and drug release characteristics of hydrogels cast as films. The second paper by Merkle and Wolany (Zürich) dealt with mucoadhesive patches for buccal peptide administration. Illum and Davis, from Nottingham, in their paper, 'Microspheres for nasal administration', described a bioadhesive microsphere system that exploited the concept of slowing the physiological clearance mechanism thus prolonging the time for absorption.

The evaluation of buccal and nasal dosage forms was covered by three presentations; the in vitro and in vivo assessments of buccal and nasal administration by Ponchel and Buri (Châtenay Malabry and Geneva); the use of animal models for buccal and nasal delivery systems by Sørensen (Bagsvaerd, Denmark), and scintigraphic studies of buccal and nasal administration by Washington and Wilson (Nottingham).

Graffner (Södertälje, Sweden) opened the section on applications of buccal and nasal administration by presenting some clinical results with respect to buccal administration; there is still a comparatively scanty access of public experiences. Harris (Malmo, Sweden) discussed opportunities provided by the buccal and nasal administration of peptides, while Pontiroli (Milano) summarized the present situation of work with nasal and oral administration of insulin and glucagon. The final paper in this section was by Hedil et al. from Göteborg and Huddinge, Sweden, who examined

the bioavailability (AUC) and plasma profile (C_{max}, t_{max}) after nasal delivery of human growth hormone and salmon calcitonin.

Collectively, these plenary lectures, together with the contributed papers present an up-to-date summary of the present state of the art in this field of dosage form development. For anyone working in this field the book is a must, for those, like myself, who watch results from the side lines, the book is a fascinating and illuminating account of work that may well culminate in totally new concepts of dosage of medicines. Can one hope that reliable nasal or buccal insulin formulations may eventually replace injections?

The presentation of the book obviously reflects speed in reporting the symposium; type faces and sizes are varied, but the individual papers are well referenced and there is a useful, but brief, index of authors and key words.

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