THE USE OF SODIUM HYALURONATE GEL 0.3% IN THE MANAGEMENT OF POST-KERATOPLASTY PATIENTS, AND PATIENTS WITH CHRONIC REFRACTORY DRY EYE AND OTHER OCULAR SURFACE PROBLEMS.

Clive Peckar, Warrington. UK.

Introduction
Sodium Hyaluronate Drops, for the management of dry eyes and corneal surface problems, have been available in the UK since 1999 (0.18% or 0.1%). Moderate to severe dry eye cases often require hourly or half hourly treatment with ocular lubricants and despite this may remain symptomatic. In 2004 a 0.3% non-preserved Sodium Hyaluronate Gel became available for the management of severe dry eyes. 20 patients, with severe dry eyes, were changed from 0.18 drops to 0.3% gel to assess if a more stable pre-corneal tear-film could be achieved with a further relief of symptoms.

Properties of Topical Sodium Hyaluronate
Amphiphilic structure: (traps & retains large volumes of water)

1. Muco-adhesive (stabilises the tear film and promotes epithelial healing)
2. Water retentive
3. Viscoelastic
4. Preservative-free (Prevents worsening of condition due to preservative toxic effect)

Patients and Methods
Location: Warrington Hospital and Spire Cheshire Hospital, Warrington UK.
Patients attending between May 2004 and January 2008
Patients with severe keratoconjunctivitis sicca, who remained symptomatic following puncto-canaliculitis occlusion with intra-canaliculellar implants (SmartPlugs™) and regular instillation Sodium Hyaluronate 0.18% drops (Vismed™), were changed to Sodium Hyaluronate 0.3% (Vismed Gel™).

- Severe ‘Dry Eye Syndrome’ 6 Patients
- Sjogren’s Syndrome 3 Patients
- Post Penetrating Keratoplasty, with
- Post Surgical Corneal Flattening 2 Patients
- Bullous Corneal Endothelial Failure 3 Patients
- Longstanding Herpes Simplex Keratitis 2 Patients
- Rheumatoid Corneal Melt 1 Patient
- Longstanding Facial Palsy 2 Patients
- Anterior Basement Membrane Dystrophy (15 Year Old Patient) 1 Patient

Results
All 20 patients achieved considerable improvement in ocular comfort and tear film stability using Sodium Hyaluronate 0.3% Gel compared to 0.18% drops. [One patient, with bullous keratopathy and a decompensated cornea, has subsequently required a bandage contact lens, for ocular comfort, and reverted to 0.18% drops].

Conclusion
Sodium Hyaluronate 0.3% Gel (Vismed Gel™) has an increased therapeutic effect compared with Sodium Hyaluronate 0.18% drops. This is presumably due to its higher viscosity & increased water retention compared with 0.18% drops. Sodium Hyaluronate 0.3% Gel (Vismed Gel™) is a valuable addition to our armamentarium for the management of patients with moderate or severe ‘dry eye syndromes’.