New device aims to make intravitreal injections safe and repeatable. Dermot McGrath reports

A novel device shortlisted for the EURETINA Innovation Awards 2014 may provide a simple, easy-to-use solution to the problem of making intravitreal injections safer and more consistent.

“We’ve developed a better way to administer intravitreal injections in terms of safety for the patient and also for the person giving the injection. This becomes particularly relevant as the volume of injections increases and we are now seeing more non-surgical staff being asked to give injections,” Sam Evans FRCoPhth, ophthalmologist and a director of Salar Surgical ltd told delegates attending the 14th EURETINA Congress in London.

The solution was to design a plastic moulding which is bonded onto a standard 30-gauge intravitreal needle. The device consists of a spring with a caliper at the bottom end providing position, depth and angle control for the needle, he said.

“The device, which is called SP.eye™, is designed to provide perfect three-dimensional control of the needle so that irrespective of who is giving the injection it will always go to the same place, at the same depth and the same angle and always through pars plana. In contrast to other devices on the market, SP.eye™ reduces the steps in the workflow, as it is integrated with the needle – streamlining the injection process and reducing discomfort and anxiety for the patient,” he said.

ENHANCED SAFETY

As well as allowing for more consistent injection methods, Dr Evans said that SP.eye™ offers enhanced safety for medical personnel.

“In the UK, the Royal College of Ophthalmologists have recently directed that nurses may give intravitreal injections under the supervision of a clinician. Using SP.eye™, nurses may deliver injections in complete confidence, whilst the supervising clinician will also know that the precision of the injections is guaranteed. Up until now, there has been no provision for needle-stick protection to avoid sharps injuries in intravitreal injections. This device offers active and passive sharps safety and is the first intravitreal needle in the world to offer such enhanced safety for medical personnel,” he said.

Figure 1: The SP.eye™ device fits both Luer-Lock and Push fit syringes, and provides passive and active sharps safety – the only intravitreal injection aid to do so.
Dr Evans added that eight per cent of intravitreal injectors have reported sharps injuries in studies, and that British and European law now decrees that sharps-safe devices should be used where they are available.

In terms of market potential, there is a clear demand for such a device worldwide, said Dr Evans. “There were around 600,000 intravitreal injections in the UK alone for 2013. We estimate the market worldwide to be approaching 15 to 20 million injections. There is no sign of this slowing down as newer agents come on to the market and existing treatments are licensed for wider indications,” he said.

Beyond ophthalmology, there are also potential applications in the wider medical market for such a device, said Dr Evans. “The core technology that underscores this device is applicable not just for the eye but across all sorts of different medical fields, for instance providing custom-made patient specific devices for biopsy or injections. The technology is protected by patents pending in multiple territories around the world,” he said.

To bring the device to market, Dr Evans and his company, Salar Surgical Ltd, have teamed up with Spectrum Ophthalmics in the UK, with an anticipated launch date of May in the UK. European distribution is expected to follow shortly thereafter.

Enquiries should be directed to Salar Surgical or Spectrum Ophthalmics.

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