



John Pacey-Lowrie applies the finishing touches to a false eye

Working with prosthetics

Ocular prosthetics is a highly specialised and satisfying line of work, as **Rory Brogan** discovered from ocularist John Pacey-Lowrie

Developing a false eye with a dilating and contracting pupil may be some way off, but ocularist John Pacey-Lowrie can already do wonders for patients who need an ocular prosthetic.

Having started out in facial prostheses, he switched to specialising in prosthetic eyes, cosmetic shells and scleral lenses 30 years ago, finding the work more interesting.

As well as having a private practice in Harley Street, he worked at Moorfields Eye Hospital for over 10 years. Now he can be found at his new practice in Nottingham, which has been up and running for six months and already has 120 patients on the books.

Patients are often referred by optometrists, for example Brooks & Wardman in Nottingham, ophthalmologists and eye hospitals, but there can also be passing business as in a recent case when a man asked him if he could do anything for his daughter who was blind in one eye.

'He was walking past, saw the practice and was desperate to get

something done for his daughter. I explained that I could make a scleral shell for a blind or damaged eye and talked him through the possibilities should they go the enucleation route.'

Pacey-Lawrie's work spans newborn babies through to the elderly, with many of his patients seeing him over long periods of time. 'Losing an eye can happen to anyone. One per cent of the world population has an artificial eye,' he says.

He emphasises the importance of fitting a baby without an eye as early as possible and it is not just for cosmetic benefits. 'We deal with new-born conditions from microphthalmia to anophthalmia. You need to fit a conformer or an artificial eye as soon as possible to stretch the soft tissue because of soft tissue growth and bony growth.'

Pacey-Lowrie manufactures prosthetics from scratch, at a rate of some three to four a week, from scleral lenses and scleral shells through to acrylic eyes in clinical quality PMMA. 'There are only a handful of specialists in the UK and it took me years to develop the skills,' he says.

As well as hand-painting to match

the patient's eye, the precision work involves using silk cotton thread which is trimmed to a fine mesh to create blood vessels. These are applied one at a time. He describes the precise work as mentally exhausting but there are rewards. 'I get enormous satisfaction from changing someone's life. Your eyes are your face and if someone cannot keep eye contact with you it is very distressing,' he says.

Scleral shells are made in the same way as an artificial eye but they are as thin as an egg shell. They are hand-painted and laminated and as they are fitted over a non-seeing eye they need to be oxygenated.

Some patients who have lost an eye are fitted with a primary Medpor implant, made from a porous material that allows blood vessels to grow through. Pegged motility devices can allow for conversational movement of the prosthetic eye.

Pacey-Lowrie starts with an alginate impression of the socket and makes a wax eye from the plaster cast. Then he shapes the aperture as near as possible and marks the centre to make the anterior chamber. Then the iris is hand-painted in front of the patient

and this is sealed in.

'The quality is better if you see fewer people in a week. You can see me on the Monday and get the prostheses on a Friday,' he says.

Another area is patients who have received trauma injuries, from car crashes to sports injuries. A recent case was a driver who lost the sight in both eyes when a scaffolding pole came through his windscreen.

'In cases when someone loses sight in a second eye, it can be really difficult to make a pair of ocular prosthetics when you are copying what you have already done and no two eyes are the same colour.

'People tend to think that brown eyes are easy to manufacture but you have the depth of colour and field and you have to make the eye look as natural as possible.'

The other category is disease and complications of surgery, for example cataract operations that have gone wrong or malignant melanomas. He has just seen a 42-year-old university lecturer whose melanoma was missed at first by an optometrist, only to be picked up by another.

'He came to me privately through the optometrist and ocular plastic

surgeon. He was lucky that it hadn't spread, but he was worried that he wouldn't be able to teach again. He has now gone back to work and his students haven't noticed that he has lost an eye. The only way you might know is that it takes 12 months for vision to compensate.'

Taking the cast of a baby's or child's eye is a lot more difficult, so this tends to be carried out under anaesthetic.

Happy kids

'It's very difficult with children.

When a baby loses an eye people are sometimes recommended to return when it is older, but that's the worst advice. We get the impression done by hook or by crook. By the time they are six or seven they are happy kids and they look great.'

He gives the example of one baby he has seen since she was six weeks old, who is now a ballet dancer.

Demand for his bespoke work is much further afield than the Nottingham area. 'I get people coming up from the south of England. Next week someone is flying in from Delhi to have his artificial eye polished. I've even had a patient from Australia.'

There are cases that are challenging

for entirely different reasons. Pacey-Lawrie recently saw a farmer whose artificial eye had rolled into the fire after he had had a few drinks. 'He asked if there was anything I could do to repair it. It was a black, charred mess. It went straight in the bin and we had to start all over again, so that was an expensive evening.'

He discourages people from taking their artificial eyes out and recommends they leave them in for several months at a time. 'The more they handle them the more they weaken the lower lid and increase the chance of an infection. It's lubricated by tears so there's no need to take it out.'

His wife Karen works alongside him in the practice in medical administration. However, none of Pacey-Lowrie's children want to follow him into the profession, so he's planning on taking on a trainee in the near future, possibly from elsewhere in Europe. 'I owe it to my patients that when I retire someone is here to take it on,' he says.

Maybe then, and with the investment of an interested company, he will have more time to work on developing a light-reactive pupil.

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