

Considering gender differences to optimise IOL mixing and matching



Magda Rau

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in Frankfurt

A NEW term, gender medicine, has been established. Based on academic and administrative suggestions (gender mainstreaming), this field has now begun to be generally accepted. The knowledge that the appearance and development of diseases as well as the effects of medicinal drugs on women and men is different is already being more and more introduced into research, into teaching and into further education.

Magda Rau MD observed different acceptance between men and women of multifocal IOLs.

Only perhaps a behavioural scientist could explain 'why' it is that men feel safer with their distance vision intact and why women prefer unaided near vision. For refractive surgeon Dr Rau, however, this assertion is backed by over 10 years of refractive surgical experience and research data from over 1300 multifocal intraocular lens (MIOL) implantations.

"Visual preferences differ between the genders quite characteristically, and when addressed, increase refractive surgical satisfaction rates substantially," Dr Rau told *EuroTimes* in an interview.

"Some of our behavioural patterns date back to the Ice Age, according to behavioural scientists, to a time when men were hunters who required clear distance vision, and women were gatherers in need of better near vision. These needs seem to be preserved in us today. It is usually a male patient who is dissatisfied with a near dominant lens and female patient who needs an adjustment: to achieve better near visual acuity.

"Furthermore, women's smaller size and stature makes them hold reading materials closer to the eye and sit closer to computers, necessitating better near acuity. Taking these gender differences into account as a factor for patient acceptance allows you to optimise IOL mixing and matching and results in greater patient satisfaction," Dr Rau said.

Dr Rau has implanted more than 1300 MIOLs over the past 10 years. Patient satisfaction was often directly associated with the MIOL type, which dictates better near/far visual acuity. Male patients showed much higher satisfaction rates with refractive distant dominant MIOL implants, offering excellent intermediate and distance vision, and were less satisfied with refractive near-dominant MIOLs and diffractive IOLs; and female patients revealed a definite preference for diffractive-type MIOL, with the addition of 4 D and refractive near dominant IOLs, she said.

Dr Rau noted gender-specific differences in MIOL preference early on in MIOL evolution, as well as a gender divergence with respect to MIOL tolerance/intolerance.

In a trial that included 40 patients (mean age 72 years) bilaterally receiving the MF4 IOL

(Carl Zeiss Meditec AG), a refractive MIOL with four optical zones including a central zone for near vision and + 4.00 addition, 30 per cent of the patients (all female) were 'very happy' with their visual outcome.

By contrast, six per cent of the patients (all male) were dissatisfied with the MF4 due to inadequate distance vision, haloes and glare. The mean uncorrected visual acuity (UCVA) was 0.63 for distance and 0.82 for near.

Dr Rau implanted a total of 230 MF4 IOLs, explaining four from four male patients, in favour of monofocal IOLs. The patients were dissatisfied with their distance vision, which was blurred and indistinct, and they were bothered by optical phenomena.

In a different study involving 22 men and 18 women, Dr Rau bilaterally implanted 80 Array (AMO) MIOLs, which has five optical zones with a central zone for far vision and a +3.5 D addition. The mean UCVA was 0.72 for both near and distance visual acuity.

While 45 per cent of the patients were 'very satisfied', six per cent (all female) were unsatisfied due to poor near visual results and another four per cent (all male) were unsatisfied due to haloes and glare.

She said that of the 280 Array MIOL implantations that she performed over the years, a total of three male patients requested explanation due to glare, haloes and insufficient near vision.

Using 2nd generation MIOLs revealed better visual outcomes, but similar predilections among male and female patients, Dr Rau noted.

In 160 eyes of 80 patients, the surgeon implanted the ReZoom refractive-type MIOL (AMO) bilaterally, giving a mean UCVA for distance of 0.78, 0.68 for intermediate, and 0.72 for near vision. The ReZoom is a distance dominant lens with five concentric refractive zones.

30 per cent of the male and 15 per cent of the female patients were 'very satisfied'. Six per cent of the female recipients were dissatisfied due to poor near vision and two per cent of the male recipients, due to glare and haloes.

Female patient satisfaction was much higher in another trial however, in which 40 patients received the Tecnis diffractive-type MIOL. In spite of UCVA outcomes of 0.92 for near and 0.88 for distance vision, seven per cent of male patients were dissatisfied with their intermediate vision, one per cent of male patients complained of glare and haloes, and one per cent of the female patients was dissatisfied with intermediate vision.

From 255 Tecnis implants in the last years she explanted one Tecnis in a man because of short reading distance and waxy vision.

To satisfy both near and distance visual needs in male and female patients, Dr Rau uses a gender-based mix-and-match strategy. The staged implantation involves a two-phased approach.

For male patients requesting clear lens exchange, Dr Rau implants the ReZoom refractive MIOL into the dominant-eye. After four to eight weeks, and an in depth discussion about options and lifestyle requirements, she either implants a ReZoom in the second eye, or, if the patient requests a slight improvement in near vision, she calculates the refractive MIOL slightly in the minus range of 0.5, or, she implants a diffractive MIOL (Tecnis) in the partner eye, for better near visual results.

By comparison, female patients generally receive a diffractive MIOL (Tecnis) or a refractive MIOL with a central zone for near vision (MF4, Zeiss) in the dominant eye, to satisfy their primary near visual needs. If satisfied, after four to eight weeks they receive either the same MIOL in the partner eye, or a refractive (ReZoom) MIOL to better accommodate their intermediate/distance vision needs.

"Higher patient satisfaction may be achieved among female patients with diffractive MIOLs, and in male patients with refractive MIOLs. The refractive lens with a central zone for distance provides vision in the far range and the second generation ReZoom MIOL scores high on satisfaction, especially among male patients," she observed.

Moreover, Dr Rau does not promise complete spectacle freedom. Mix-and-match techniques,

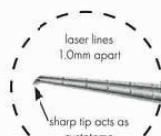
although coming close to the mark, do not promise spectacle freedom, she stressed.

"Gender medicine is a fascinating, emerging field. There are many instances that go beyond visual preferences, in which male and female reactions to therapy and preferences to treatment diverge, and it is important for the clinician to be aware of them," she noted.

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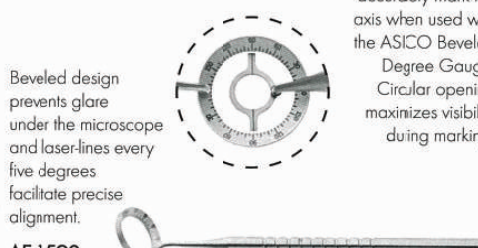
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AD71-09