She was fitted with a soft contact lens to both eyes but the left contact lens was discontinued latter, as there was no visual benefit.

Since the first documentation of the endothelium pigmentation, to date (3.5 years), there has been neither progression to peripheral oedema nor progression of the endothelial pigmentation to cover the superior half of the cornea.

## Discussion

Case 1 is the first time that the peripheral oedema has been seen to start superiorly as opposed to the classical description in which the oedema usually begins inferiorly. Initially there was no pigmented endothelium underlying the area of oedema, but it appears at later review. The patient presented in Case 2 was 12 years of age when the typical endothelial pigment was noted, the youngest to present with an aspect of BM syndrome. Previously Gothard *et al*<sup>2</sup> described a 26 years old patient with BM syndrome. Taft *et al*<sup>3</sup> argued that endothelial pigmentation alone is not specific for this syndrome as they observed a similar pattern of pigment dispersion in eyes following ICCE in which there is no sign of peripheral oedema. We would suggest that this syndrome may have a variety of signs that could range from peripheral corneal oedema alone, endothelial pigmentation alone or the combination of both.

In aphakic patients, iridodonesis has been suggested to be a cause of an intermittent abrasion of the endothelium<sup>4,5</sup> and that superior iridectomy could have some role in protecting the superior portion of the cornea from the development of oedema,<sup>2</sup> but we can argue that case 1 had a broad sector iridectomy superiorly yet still had peripheral oedema overlying the area of iridectomy.

It is our belief that BM syndrome is often under diagnosed and that it has variable presentations that should be documented even though it will remain asymptomatic in most patients. Patient should regularly be reviewed by an ocular healthcare professional and educated about the clinical signs and symptoms, this is especially so if the patient is corrected with contact lenses as opposed to spectacles.

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#### Sir,

# Questionnaire-based research in ophthalmology: questioning the quality

There have been many articles over recent years that have included questionnaires in the study methods, most recently the National Biometry Audit II.<sup>1</sup> Much has been published both in text books and in the peer-reviewed literature concerning best practice in questionnaire design and utilisation,<sup>2–5</sup> and while questionnaires are clearly an invaluable research tool when used appropriately, poorly constructed questionnaires produce meaningless or misleading responses, and lack of rigour in analysis leads to the formation of invalid conclusions.<sup>6</sup>

The National Biometry Audit II utilised a telephone-administered questionnaire, recruiting 94 biometrists from 178 potential interviewees (53%);<sup>1</sup> there would be no reason to assume that the 47% who did not respond were similar to those who did. The risk of systematic bias being introduced is clearly a problem that should have been discussed in the article; nonresponders might well have been found to be less rigorous in their biometry practice than responders, hence the true picture of biometry practice in the UK may be less healthy than that reported. Maximising response rate is one way in which the effect of systematic response bias can be reduced, and some journals have employed response thresholds below which they will automatically reject questionnaire-based studies.<sup>7</sup> There are well-established guidelines on how to maximise response rate in surveys, despite which many studies are published that have failed to take advantage of these and often suffer as a result.<sup>8</sup>

A hand search of all articles published in *Eye* over the past 10 years found 26 studies involving questionnaires. We compared the published methodologies of these studies to the points of best practice identified from a literature review.<sup>2–5</sup> Although some studies were extremely rigorous, pre-testing of questionnaires, maximising response rates, and taking into account the possible bias introduced by under-attainment in the analysis or even making active attempts to characterise non-responders, there were more studies that did not.

We would encourage all authors undertaking questionnaire-based research to pay close heed to their study design. Where the number of potential interviewees is large, random sampling might be a better way to reduce the overall numbers rather than self-exclusion by nonresponse.

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## Sir, **Reply**

We applaud the authors for attempting to address the issue of mobile phone use around ophthalmic equipments. The paper concludes that 'devices are unlikely to be significantly affected by electromagnetic interference' and questions the need for a complete ban of mobile telephones in ophthalmic departments. Although probably true, it appears that the methods used may not be robust enough to draw these conclusions.

The study did not address the phones' energy emissions when observing for effects on the tested equipment; thus, these results are valid only for the exact time, place, and handsets used. This is because a mobile phone increases or decreases its energy output depending on its proximity to the base station (a phenomenon known as 'adaptive energy'), the state of the call (standby, connecting or connected), and there is further variability in energy output between individual handsets and networks. Therefore, electromagnetic interference testing without simultaneous energy or power measurements can be dangerous as it may lead to a false conclusion of relative safety. One such example is where there happens to be a base station in close proximity to the test site resulting in the phones emitting only a fraction of their potential energy.

Although the results are encouraging, we feel that caution should be exercised when drawing conclusions from these data.

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