**OBJECTIVE** Complications related to low birth weight and born-small-for-gestational-age have not improved despite medical advances. In Spain, the incidence of premature births has been estimated at 30,000 per year. (INE, 2007). Another cause of concern is that in Spain not every hospital with a Neonate Unit has ophthalmologists specialized in ROP (in Spain there are around 100 ROP specialists). As a consequence, newborns have to be transferred to another centre when ROP is suspected. This study was designed to assess the early detection and follow-up of retinopathy of prematurity (ROP) by remote reviewing of digital images by two masked observers.

**METHODS**

We designed a descriptive, comparative observational study. The study sample was made up of 20 reconstructed retinal pictures obtained in 20 eyes of 20 low-birth-weight infants taken using a wide-angle fundus digital camera.

**RESULTS**

Correlation between physicians in assessing disease extension was Kappa = 0.40, in staging the disease was 0.53 and in plus disease designation was 0.48. The most important finding is that no two patients were treated by inexperienced observers and four were overtreated. The lack of correspondence in follow-up was even more remarkable. All the physicians agreed upon treatment and follow-up in ten patients but agreement was never reached as to disease stage and extension.

**CONCLUSIONS**

Although remote-examining of digital images holds promise for the early detection of ROP, the disagreement observed here between inexperienced physicians and specialists indicates a need to improve on the system tested here. Training in picture evaluation and improving knowledge of this disease would be the best areas to focus on in the future. Another solution would be to transfer the pictures using telemedicine techniques directly to ROP specialists for assessment rather than to physicians inexperienced in interpreting retinographies.

**REFERENCES**