

Agreement Among Canadian Retina Specialists in the Determination of Treatment Eligibility for Photodynamic Therapy in Age-related Macular Degeneration

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PURPOSE

To determine the inter- and intra-observer agreement among Canadian retina specialists in the determination of treatment eligibility for photodynamic therapy and the angiographic classification of CNV. Agreement was also determined between retina specialists and the University of Wisconsin Fundus Photograph Reading Center.

METHODS

All retina specialists in Canada were asked to participate in a web-based survey, which consisted of 24 cases of AMD provided by the Reading Center. Participants were provided with a digital colour and/or red-free photo, in addition to the digital FA for each case and asked to indicate if they would treat with PDT and to categorize the CNV. Agreement was determined for decision to treat and for interpretation of the FA. The angiographic interpretation by participants was also compared to that of the Reading Center for each case. All participants were asked to repeat the survey after an interval of 6 months, with the same 24 cases randomly rearranged to determine intra-observer agreement.

RESULTS

40 Canadian retina specialists completed the survey. The 24 cases selected by the Reading Center consisted of 9 predominantly classic lesions (PC), 5 minimally classic (MC), 6 occult with no classic (ONC) and 4 others(O). The ICC for treatment decision and lesion categorization were 0.293(95% CI=0.184-0.419) and 0.430(95% CI= 0.364-0.518) respectively. The ICC among participants for lesion categorization was 0.615 for PC, 0.184 for MC, 0.507 for ONC and 0.278 for O. The mean raw agreement with the Reading Center for lesion categorization was 65.42% (83.77 for PC, 41.60 for MC, 69.83 for ONC and 47.24 for O). The pooled estimate of kappa between observers and the Reading Center for lesion categorization was 0.561 (95% CI=0.503-0.620). 26 of the 40 retina specialists repeated the survey at 6 months. The pooled estimate of kappa for intra-observer agreement was 0.58 (95% CI=0.425-0.735) for treatment decision and 0.572 (95%CI=0.503-0.642) for lesion categorization.

CONCLUSION

There is poor interobserver agreement among Canadian retina specialists for decision to treat with PDT and moderate agreement for angiographic CNV categorization. There is moderate agreement between observers and the Reading Center for angiographic CNV categorization. There was moderate intra-observer agreement for both treatment decision and lesion categorization.