INTRODUCTION:
Macular edema occurs when fluid and protein deposits collect on or under the macula and causes it to thicken and swell. Various choroidal abnormalities including obstruction of the choriocapillaris, vascular degeneration, choroidal aneurysms, and choroidal neovascularization have been reported in histopathologic studies of diabetic eyes. Adequate measurement of choroidal thickness using spectral domain optical coherence tomography (SD-OCT) is possible by introduction of an enhanced depth imaging (EDI) technique.

METHODS:
Twelve eyes of 9 patients with DME (65.5 ± 8.4 years), 9 contralateral eyes without DME (60.2 ± 13.7 years), and 186 eyes of 96 age-matched healthy volunteers (62.1 ± 19.4 years) underwent enhanced depth imaging (EDI) spectral-domain optical coherence tomography (SD-OCT) with a Heidelberg Spectralis HRA+OCT. Choroidal thickness was measured manually with a ruler included into the device’s software application.

EFFECTIVENESS/SAFETY:
Reliable measurements of choroidal thickness were obtained in 72.3% of eyes examined. In the DME group the mean choroidal thicknesses were 232.4 ± 74.7 µm at the fovea, 223.3 ± 70.0 µm nasally, and 234.0 ± 72.9 µm temporally. In the contralateral eyes these measurements were 279.9 ± 103.6 µm, 252.8 ± 86.4 µm, and 283.9 ± 101.4 µm, respectively. Finally, the control group showed slightly higher values: 288.6 ± 114.5 µm, 279.1 ± 112.7 µm, and 283.8 ± 104.3 µm, respectively. However, choroidal thickness did not show any statistically significant differences among the three groups of eyes (p>0.05, ANOVA test).

ADVANTAGES:
The choroidal thickness in patients with diabetic macular edema (DME) compared with that in contralateral eyes and in healthy controls let us know the true role of choroids in DME.

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E-Mail: jascaso@gmail.com

CONFLICT OF INTEREST:
The authors of this poster declare no conflict of interest related to the article.

TAKE-HOME MESSAGE:
Although a decreased choroidal thickness has been reported in eyes with DME, no differences were found in present study when age was counted as a confounding variable. Age has a strong inverse relationship with choroidal thickness and this fact must be taken into account.