Full thickness macular hole (FTMH) has already been described as the major complication after pars-plana vitrectomy (PPV), peeling of epiretinal membrane (ERM) and of internal limiting membrane (ILM) for lamellar macular hole (LMH). In this study, the authors tried to identify the risk factors of inducing FTMH after PPV and peeling of ERM+ILM with or without cataract surgery.

The preoperative OCT characteristics evaluated were the following:
- type of ERM (tractional or dense membrane)
- intraretinal cysts
- maximum diameter of intraretinal splitting (microns)
- residual foveal tissue thickness into the hole (RFT) (microns)

The postoperative OCT findings were the following:
- central foveal thickness (microns)
- intraretinal cysts
- macular atrophy
- FTMH development

The intraoperative data were the following:
- Duration of surgery
- Endotamponade type
- Combination with cataract surgery
- Type of dye to peel ERM or ILM
- Use of Triamcinolone to visualize the posterior vitreous detachment

The best-corrected visual acuity was measured at baseline and at 1, 3 and 6 postoperative months.

The authors recruited 21 eyes (15 right, 6 left) of 21 consecutive patients (14 female, 7 male) that underwent PPV for idiopathic LMH between May 2011 and September 2013.

LMH was associated with dense ERM in 9/21 cases (42.86%). Three cases developed FTMH after vitrectomy. In all three cases the LMH was associated with dense membrane and RFT mean value was lower than RFT mean value of the whole group (88.33±27.53 micron vs 107±39.92 micron). The dense membrane and the reduction of RFT are the risk factors for developing of FTMH after PPV for LMH.