We describe a case of a 72-year-old man who received a planned deep anterior lamellar keratoplasty using the “big bubble” technique for removing traumatic central corneal scar of his right eye. He presented Descemet’s membrane (DM) splitting with air bubble trapping over lower third cornea intraoperatively. The air bubble spontaneously resolved after 3 days without any surgical intervention. The patient’s vision recovered well without any late sequel except some DM corrugation. This situation can occur because DM’s anatomic structure can be opened by the gas dissection. DM splitting may result in undesired results such as double anterior chamber, corneal edema, or DM corrugation after reattachment, which was noted in our case. We should be aware of this specific risk while performing DALK with big bubble technique, thus we may recognize it when it happens.