We observed distribution of paclitaxel particles on the vascular wall after drug-coated balloon (DCB: IN.PACT\textsuperscript{R}) intervention using an electronic high-resolution angioscope equipped with a 480,000-pixel imaging camera (Zemporshe\textsuperscript{R} OVALIS, Osaka, Japan). A 78-year old woman underwent endovascular treatment for right femoropopliteal chronic total occlusion (CTO). After successful wiring through the lesion, we performed pre-dilatation followed by DCB deployment. After pre-dilatation with a balloon, angioscopic image revealed the intimal flaps or plaque fragments in the lesion waving with dextran flow protruded into the vascular lumen. However, post DCB angioscopic image revealed the intimal flaps or plaque fragments were compressed on the vascular wall and paclitaxel particles were distributed homogeneously even on the dissection parts. Assessment of drug distribution using the angioscope may be useful for evaluating efficacy of DCB interventions.