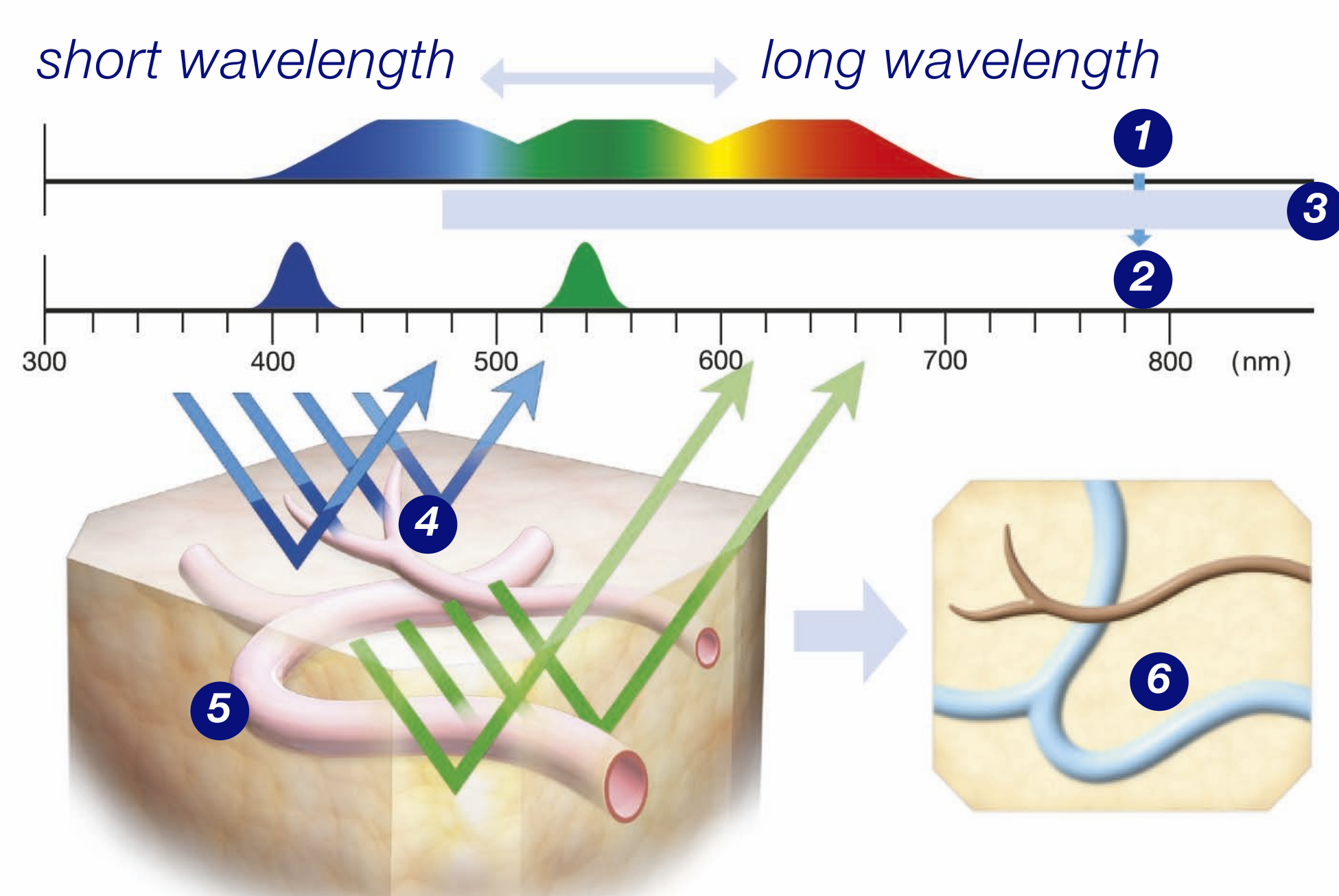


## IMPORTANCE OF NBI (NARROW BAND IMAGING) FOR LARYNGOSCOPY

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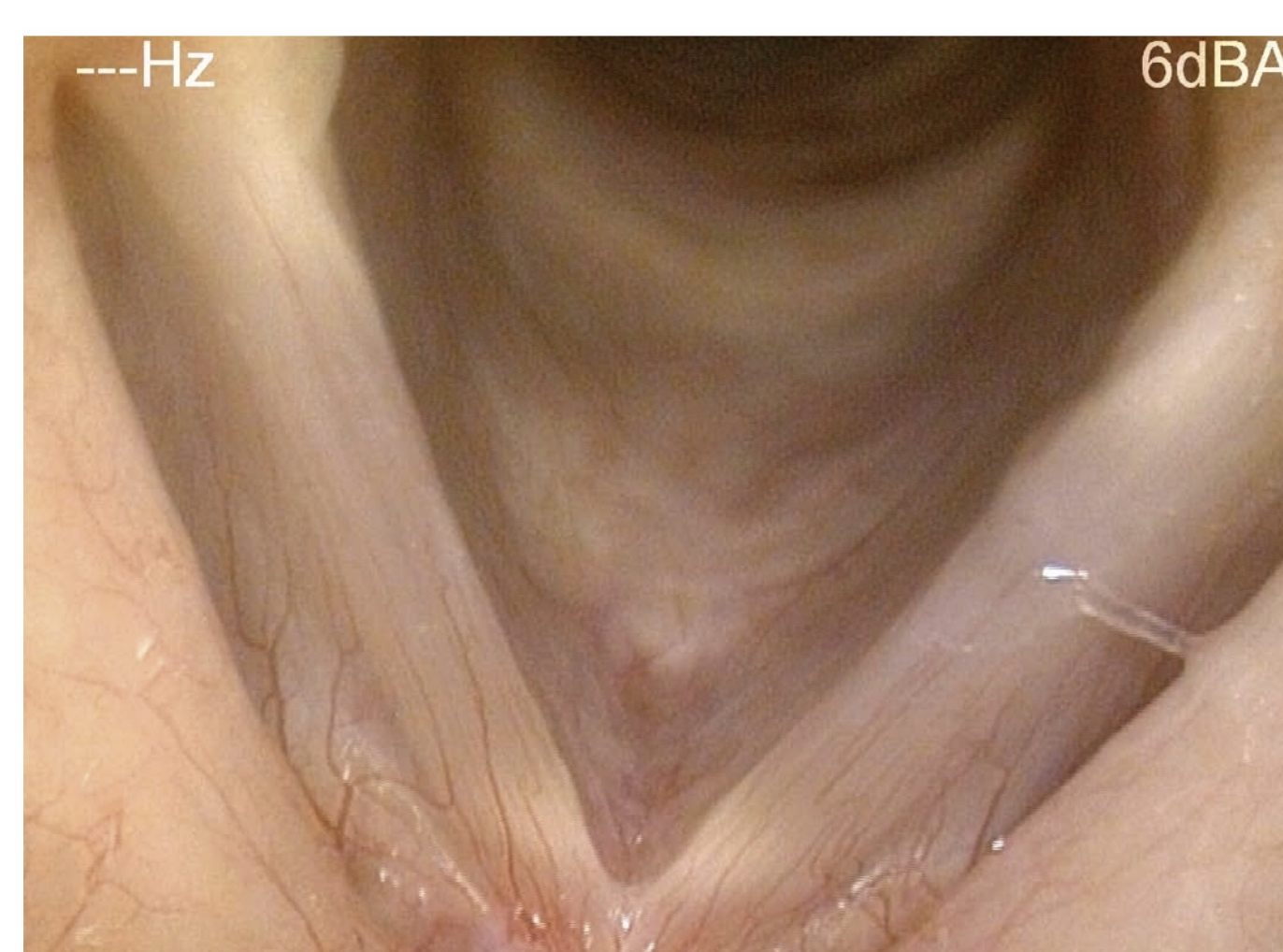
OTTO VON GUERICKE  
UNIVERSITÄT  
MAGDEBURG



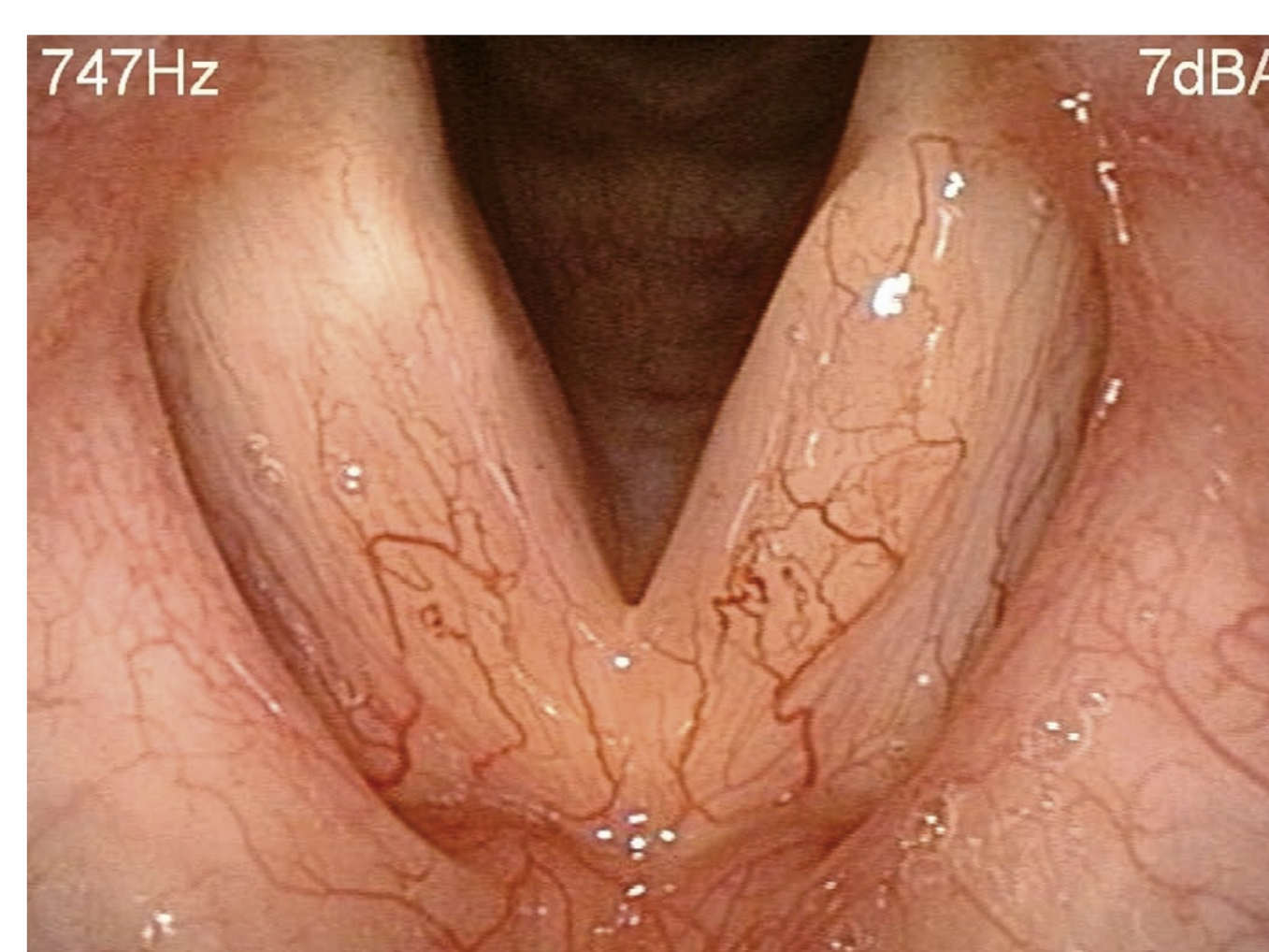
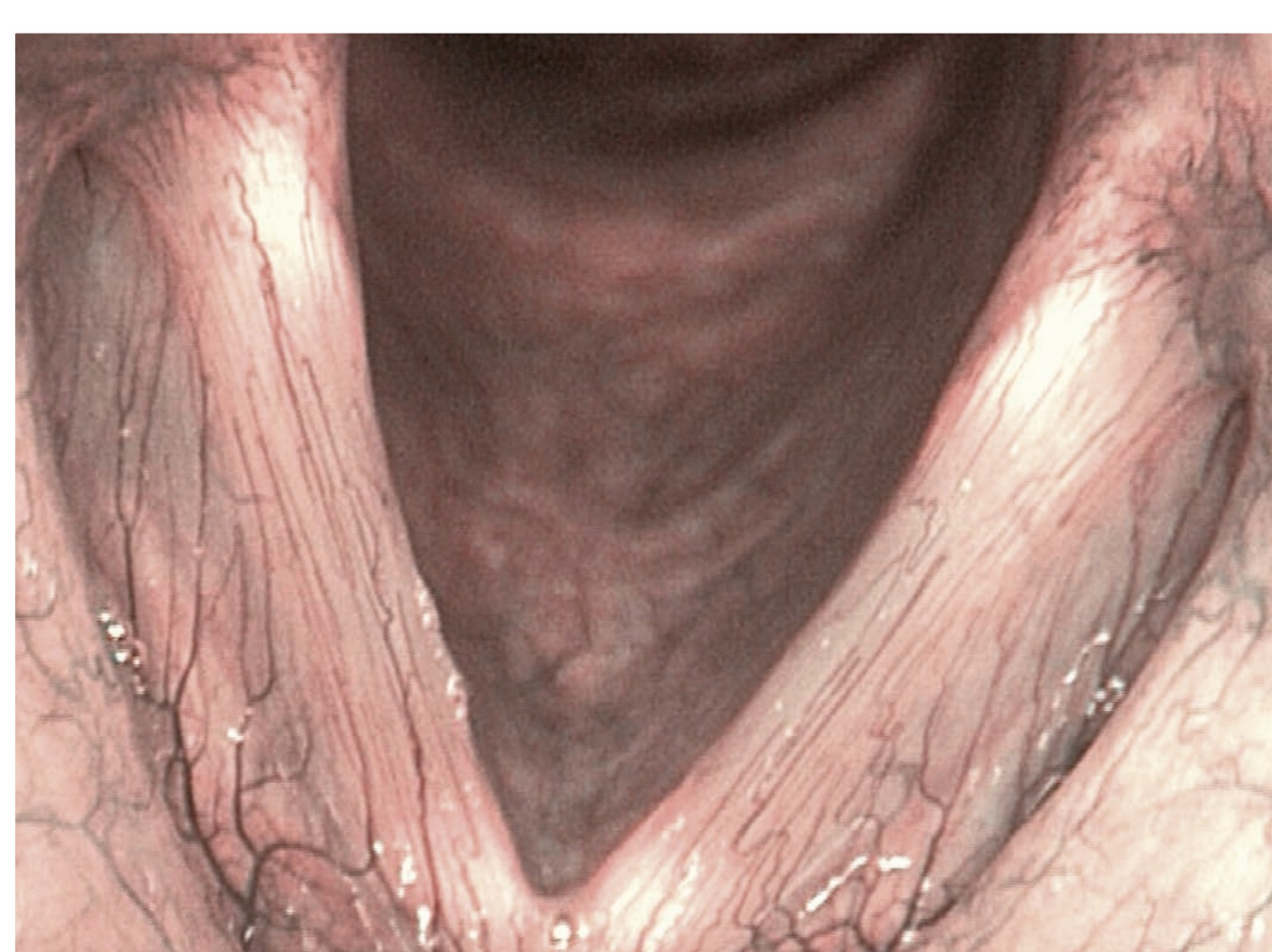
### Differentiation of vessel structures with NBI

- 1 Spectral characteristics of white light endoscopy
- 2 Spectral characteristics of narrow band light
- 3 Reduced penetration depth and selective absorption
- 4 Capillaries on the mucosal surface
- 5 Submucosal veins
- 6 NBI image on the monitor screen:  
Capillary vessels on the mucosal surface  
appear brown and the submucosal veins cyan-coloured

The new method of narrow band imaging (NBI), particularly combined with a high resolution (e.g. HD-TV), can provide a more detailed and higher contrasted visualization of visible blood vessels than previous endoscopic procedures. Before vocal sound or vocal capabilities deteriorate, i.e. before patients contract dysphonia, NBI can be routinely used to determine early changes to the vessels of the vocal folds, which can also be quantitatively and qualitatively classified.



Healthy vocal folds, showing no irregularities, are displayed with a higher contrast in the NBI image



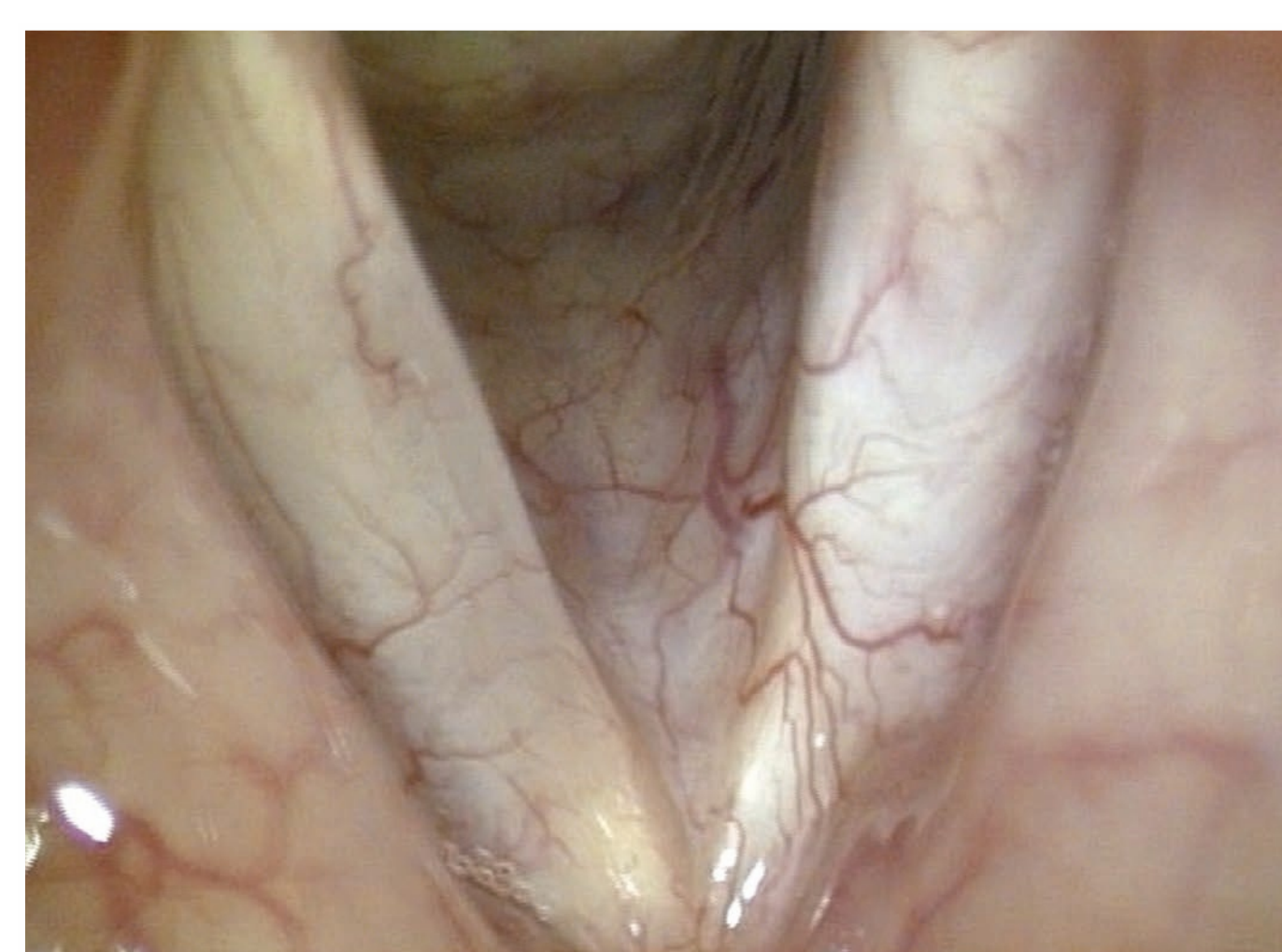
Mild vocal cord edema with epidermization in the region of the medial vocal fold edge with cervicogenic dysphonia: degree of ectasia and change in the course of the vessels different on each side



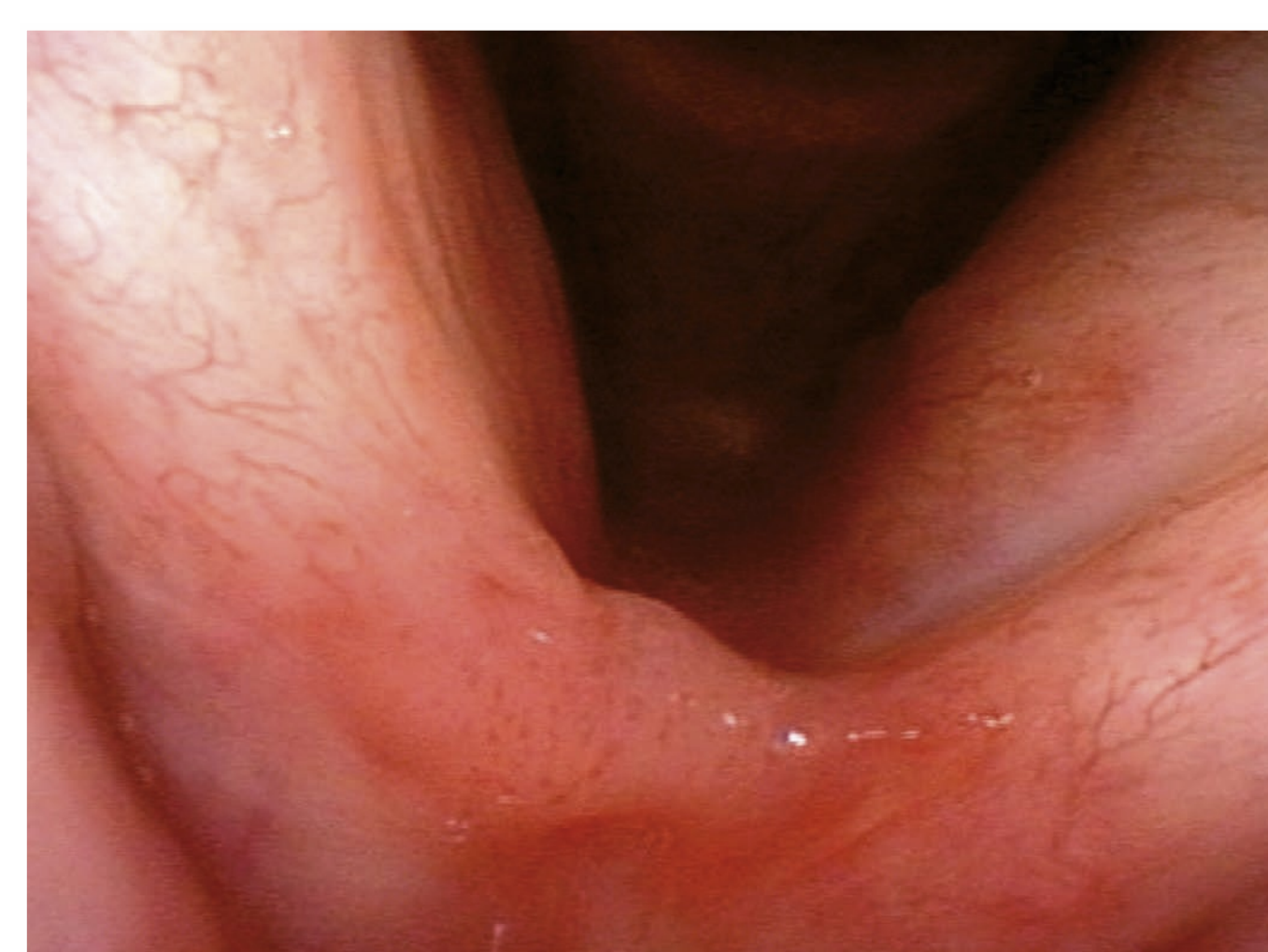
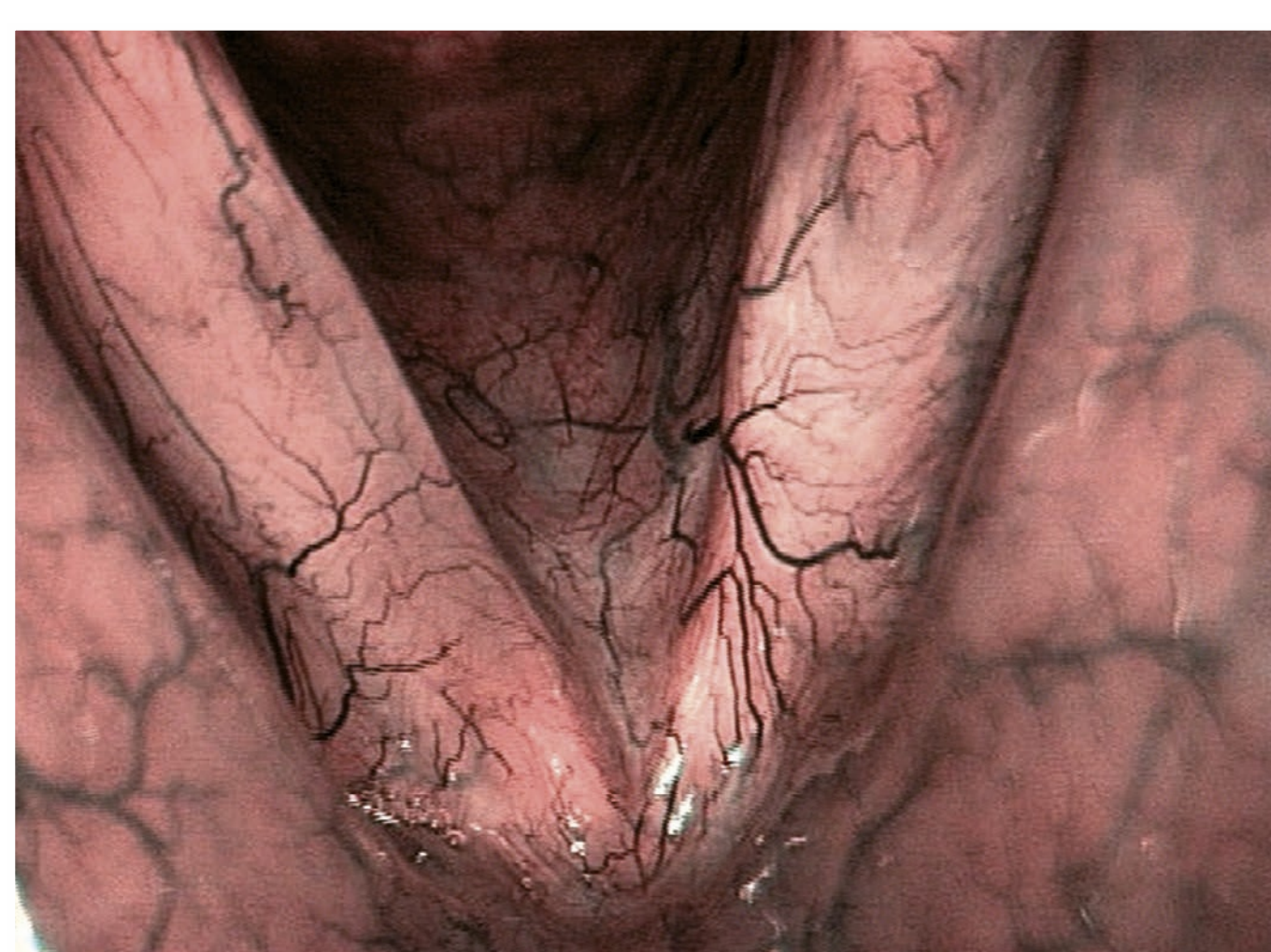
Vascular ectasia and vascular convolute with a polyp in statu nascendi on the left vocal fold



Telangiectatic vocal fold polyp with increased vascular markings on both sides



Vocal fold scars on both sides with changes in course direction and marked branching of the vessels



Recurrent papilloma with intraepithelial papillary vascular loops in the anterior commissure with mild synechia



Leukoplakia of the left vocal fold, vascular dilation and epithelial swelling on both sides



Keratinizing squamous-cell carcinoma of the right vocal fold with atypical vessels (Extent is clearly more visible in the NBI image)

