**Supplemental Figure 1. Hypothesis of pathological mechanisms in this case**

Infiltration of bone marrow derived fibroblast to the orbital tissues, and ectopic expression of TSH receptor and overexpression of IGF-1 receptor on this fibroblast were suggested for the primary origin of Graves’ ophthalmopathy. GH administration, which activates IGF-1 production, may lead to the enhancement of aberrant TSH receptor signaling.

