Leptonic and semi-leptonic D decays at BESIII contribute the most precise experimental measurement of $V_{cs(d)}$ and form factor $f_{D(s)}$ in the world. Largest samples at the mass threshold of the charm baryons $D_{(s)}$ also provide chances to extract form factors of some semi-electronic decays for the first time and together with the semi-muonic decays we could understand lepton flavour universality better. This talk would introduce the recent results of leptonic and semi-leptonic D decays at BESIII.