



**FIGURE 7** | **(A)**umap projection of all cells,resolution=0.8.**(B)**Violin plot depicts distributions of cell type marker genes in each cluster using density curves.  
**(C)**Dot plot of cell type marker genes.**(D)**umap projections for the CRSsNP and CRSwNP groups, respectively.**(E)**Cell proportion of each cluster of sample group.  
**(F)**Glycolysis pathway scores for CRSsNP and CRSwNP groups in all celltype.**(G)**Hypoxia pathway scores for CRSsNP and CRSwNP groups in all celltype.  
**(H,I)**Dot plots of P4HA1, HIF1A and LDHA gene expression.