Objective  Common femoral artery (CFA) access has been proved to be safe with lower risk of complications in percutaneous catheterisation. The femoral head can be utilised as a reliable landmark to locate the level of femoral bifurcation and the common femoral artery. In the present study, we evaluated the site of femoral bifurcation in Chinese population on femoroiliac angiograms.

Methods  We enrolled 529 patients undergoing cardiac catheterisations via femoral artery from June 2008 to October 2009. Femoral angiograms were performed in all patients preparing to use vascular closure devices. Based on the femoral head and the midpoint of pubic symphysis as landmarks, the midpoint, inferior and superior margin of the femoral head were used as borderlines to divide the inguinal region into four zones (A, B1, B2 and C). Location of femoral bifurcation and CFA were evaluated on femoral angiogram.

Results  Femoral bifurcations located in the area of A, B1, B2 and C with 0.2% (1/529), 2.3% (12/529), 42.4% (223/529), 55.4% (293/529), respectively. When arterial puncture located on zone B, B1, B2 and C, CFA cannulation was obtained in 85.0% (436/513), 95.8% (160/167), 79.8% (276/346) and 38.5% (5/13), respectively.

Conclusions  We originally introduced a reliable method for inguinal vascular zone division. The majority of femoral bifurcations located below the midpoint of femoral head in Chinese population. It is an effective measure to puncture common femoral artery between the superior and inferior border of the femoral head, especially between the superior border and the midpoint of the femoral head.