

Comparison between TDX and QMS assay for whole blood everolimus concentration assay - using samples from LDLT recipients

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Objectives

Both fluorescent polarization immunoassay (TDX) and quantitative microsphere system (QMS) assay were used to measure the everolimus concentration. We conducted this study to compare the difference between these two methods of assay.

Methods

The blood samples measured as trough level were collected from living donor liver transplantation (LDLT) recipients who had taken everolimus more than 7 days, when the level became steady. All the blood samples were collected in October 2012. Both TDX and QMS assay were performed and the differences in between were compared .

Results

There were totally 103 pairs of blood samples enrolled into the study. As shown in figure 1, simple linear regression method was used to compare between the concentration from TDX (x axis) and QMS (y axis) assays. An equation as $y=0.8893x-0.1293$ was yielded and the correlation coefficient was 0.72.

Conclusion

Based on the results from our study, the everolimus concentration can be measured with either TDX or QMS assay. This might help the care personnel, where QMS assay is not available, to adjust the dose of everolimus.