Collapsing magnetic trap as accelerator of electrons

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A quasi-stationary collapsing trap is simulated using a 2-D MHD model. Then in this collapsing trap an acceleration of electrons is studied in detail. We used a test particle technique in which collisional losses and pitch angle scattering of electrons in dense plasma are included. We found that this 'secondary' acceleration process efficiently accelerates electrons pre-accelerated in the reconnection. This acceleration process explains a formation of flare loop-top X-ray sources in a very natural way.