The aim of this study was to compare the outcome of open reduction versus closed reduction of midclavicular fractures using elastic stable intramedullary nailing (ESIN) in both groups. Titanium elastic nails were used to treat 40 patients undergoing minimally invasive ESIN between December 2006 and July 2009. A total of 19 patients were treated with a closed reduction and 21 patients required open reduction. The Constant Score revealed no significant differences between the two groups (closed 87.4±9.0; open 85.3±7.1) nor did the DASH Score (closed: 5.0±6.5; open 5.8±7.3). The strength measurement of shoulder abduction was consistent in each group: 75.7±22.0 N in the closed reduction group and 74.2±26.0 N in the group with open treatment. There was no difference comparing right- and left-sided injuries and the outcomes were consistent irrespective of the treatment method. When appropriately indicated open and closed intramedullary nailing are very successful modalities of treatment. There were no significant differences in shoulder function after either procedure.