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Reliability of computer-generated prediction tracing

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ABSTRACT

The reliability of a commercially available computer prediction program (Quick Ceph II) was evaluated using pretreatment and posttreatment cephalograms of 30 patients who were treated during an active period of growth. The computer prediction was compared with the actual treatment result, and the growth forecast with the computer program was compared with the growth forecast using a manual method. Using paired student's t-tests, predictions for 5 of the 10 variables measured were found to be statistically reliable. Comparing the relative accuracy of growth prediction in terms of absolute values, the computer came closer to the actual result in four of the nine variables, while the manual method came closer in three variables. Predictions for the other two variables were virtually the same using both methods. The manual method of prediction was sufficient to give a reasonably good graphic representation of growth changes to create a VTO. However, the computer offers the added advantages of quicker access to information and somewhat greater accuracy in producing the tracing, as well as its use in patient education.

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