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Rehabilitation Using Cybex Machines After Receiving Injuries on the Knee

By *Katsuhide Ando**

As statistic data show, the incident rate of traumatic injuries on the knee portion due to sports is considerably high. Any player is desirous of returning to plays as early as possible. At present in the United States, due to the development of isokinetic exercises, a rehabilitation therapy is being employed in order to have those suffering from injuries return to plays infallibly and early.

In view of the fact mentioned above, studies were made in cooperation with James F. Welsh, a trainer at San Jose State University, California State, USA; in the study, Cybex machines were used in the rehabilitation of patients received injuries and a report on the process of recovery until they became 90% or 100% capable of returning to plays was presented.

As to the treatment program in which Cybex machines were used, on most cases, comparisons were made between the quadrisepts of the health side and that of the suffering side. Based on the data thus obtained, treatment programs were established, and according to the program, the patients were given exercises at their recovery levels of 50%, 75%, 85% and at the level more than 90%, according to the state of recovery.

The results were that of the 8 cases, 20 weeks were required for cartilage removal, 17 weeks for cartilage repair, 18, 27 and 30 weeks for ligament repair and 14, 16 and 22 weeks for A.C.L. repair respectively, and these patients were permitted to return to plays at their recovery levels of 90% and 100%. On the other hand, some of the patients were permitted to return to plays at the recovery levels other than 90% or 100%, this was because of the difference in sport events they took.

As to the timing of commencing rehabilitation positively, it is considered that the timing is proper when flection of the knee joint (R.O.M.) has been improved

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nearly to 110 degrees, and when the score of the Cybex has been counted more than half of the score of the healthy side.

In the present study, comparisons were made between the healthy side score and the suffering side score, as well as between the score before operation and the score after receiving injuries. In some cases, the healthy side score may drop after operation, therefore, the score of a person when he is healthy (pre-operation score) should be obtained, and this score should be compared to the score of the suffering side, by so doing, the chances of risk of injuries being caused again during the course of treatment can be lessened.

As the last work, evaluation was made of the strength aspect of all the cases as to 10 R.P.M., however, discussion of the power aspect as to 30 R.P.M. may also be necessary.