

SPINE SURGERIES IN THE AGING SOCIETY

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Introduction: In Japan as an aging society, the aged have recently increased their claim for their active life of high quality. As consequence, spine surgery for them grows in number. This paper describes a recent dramatic increase of surgeries for degenerative spinal diseases and a strategy for them. Materials and Methods: Tohoku University and its affiliated hospitals covering a population of about four million started registering all spinal surgeries in 1988. The total number of surgeries was 38,908 for 20 years to 2007. Degenerative spine diseases accounted for 86% of the whole series: cervical myelopathy for 21%, lumbar disc herniation for 30% and lumbar spinal stenosis for 31%. Results: In the 20 years, the annual number of surgeries increased from 892 to 2,941, i.e., by 3.3 times. Cervical myelopathy increased by 3.1 times, lumbar disc herniation by 2.3 times and lumbar spinal stenosis by 6.6 times. As a result, the numbers of these diseases in 2007 were 572, 669 and 1,238, respectively. In the same period, the annual number of surgeries for patients aged 70 or older increased from 76 (8.5% of the whole surgeries in 1988) to 1,084 (36.9%), i.e., by 14.3 times in number and 4.3 times in percentage. Cervical myelopathy and lumbar spinal stenosis increased by 7.4 times and 24.0 times in number, respectively, and 2.4 times and 3.7 times in percentage, respectively. In contrast, patients aged 15 years or younger stayed around 30 in number. Conclusion: With the advance of the aging society, cervical myelopathy and lumbar spinal stenosis have become key diseases leading to surgery, especially for the aged over 70. Surgical procedures for degenerative diseases need to be reasonable in term of effects, invasiveness and cost.