

circulation in the lower extremities. Blood velocity in the femoral artery was examined by the ultrasonic Doppler method in 145 healthy females between the ages of 15 and 96. The subjects were divided into four groups: ten ~ twenties, thirty ~ forties, fifty ~ sixties and over seventy.

In the supine position they were asked to exercise on an ergometer for five minutes at a load of 20 watts. Before and after the exercise, the ankle pressure index API [Systolic pressure of brachial artery (APS) / Systolic pressure of dorsalis pedis artery (BPS)] and the area under the Doppler curve (AUDC), using an image analyzer (IBAS 2000), were measured.

With increasing age the number of people who walked regularly and had hobbies increased. In the resting state BSP and ASP increased with age, but there was no significant difference in API among the four groups. After exercise BSP and AUDC increase significantly in all groups. AUDC increased most in the thirty ~ forties group regardless of their life style. This is partly due to the relatively light exercise load for this age group which had good circulation in the legs.

For elderly people proper exercise may contribute to good circulation in the legs and improvement of QOL.

Quality of Life Assessments of Cancer Patients with Palliative Care

— Total Sufferings of the patients who are unresponsive to curative treatments —

Harumi KATAYAMA

This is a preliminary study to develop a new questionnaire for QOL assessments of cancer patients who are unresponsive to curative treatments and their families. To select the QOL domains suitable for assessment of the patients, the author investigated 19 cases at a palliative care unit of a general hospital founded by a Christian organization. In this paper, three cases are described.

Among total sufferings, it was revealed that the physical suffering needed to be palliative first, because physical suffering interfaces with the recognition of other types of suffering. And easing of physical suffering discloses of other types of suffering. Palliation of psychological suffering which modifies physical suffering is necessary for patients to accept their situations and maintain as normal life-style as possible.

In conclusion the questionnaire to assess the QOL of patients with advanced cancer should take into consideration for the stage of the disease and the acceptance of the disease by patients and their families.

Pattern Generator for Rhythmical Movements during Oviposition Behavior in the Cricket

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A quantitative analysis of electromyograms recorded from the cricket ovipositor valve muscles was done in terms of the cycle period, burst duration, and relative burst onset times of rhythmic bursts associated with oviposition behavior. In a freely moving animal, the temporal pattern of rhythmic bursts changed in the following sequential order during oviposition behavior: searching, positioning, penetration of ovipositor, short lift of ovipositor, rest phase, egg deposition and withdrawal of ovipositor. Two types of rhythmic bursts, one occurring during short lift of the ovipositor-step and the other during the egg deposition-step, were produced by transection of the ventral nerve cord between the fourth and terminal abdominal ganglia in an intact animal or by pinching the ovipositor in a transected animal. In a transected animal, 2×10^{-3} M pilocarpine (muscarinic cholinergic agonist) applied to the ganglia evoked repeatedly in turn the two types of rhythmic bursts. These facts showed the presence of a pattern generator for the egg-laying portion of the oviposition motor program in the terminal abdominal ganglion.