TUBERCULOSIS OF BONE AND JOINT IN JAPAN

By Torai Iwahara

In Japan, especially in big cities, the incidence of bone and joint tuberculosis has dropped steadily and has shown a striking further decline in recent years.

The incidence decline at Orthopaedic department of Keio University Hospital is very demonstrable. Thus during 16 years before World War II, for the out-patient as a whole, the minimum rate was 10%; during 9 years after World War II, 1%; during next 6 years, 0·1%; and at present, 0·03 to 0·05%. Therefore, it is quite rare in the daily clinic to be faced with the tuberculosis of bone and joint these days.

In evaluating these figures, this sudden decline is to be credited to the following fact.

In the past years, pulmonary tuberculosis was so prevalent that it's mortality rate was the highest in the nation. However, in 1951 the prevention law of tuberculosis was accepted as the national health policy and over 170 national sanatoriums were settled all over Japan. Since then nation-wide prevalence of this law and also the progress of chemotherapy and surgery has decreased the pulmonary tuberculosis rate and made these involvements mild.

Therefore, this striking decline in number is offering many vacant beds in sanatoriums and it allows the release of such sanatoriums for other uses.

Pertaining to the tuberculosis specialist, many young doctors had enlisted in this field of medicine right after World War II. However in recent years no new specialist has enlisted. On the contrary, regular specialists in this sphere are seriously thinking of their conversion to some other field.

It is natural and reasonable that the decline of incidence of bone and joint tuberculosis should parallel that of pulmonary tuberculosis. This is due to the fact that pulmonary tuberculosis is considered to be the fore-runner of bone and joint tuberculosis.

These days in the university hospital, new incidence of tuberculosis of bone and joint is not only declining in number but also those that have been neglected or are old one in it's stage. Furthermore, only one or two cases of new provocation of coxitis tuberculosa in children are observed throughout the year.

Regarding the age incidence, the rate was high in young people before World War II, however in recent years it is high with the old people.

Now, before commenting on their treatment, I would like to say that the struggle against tuberculosis is over and that tuberculosis of bone and joint is curable or cured satisfactorily.

Our therapeutic measures include absolute bed rest with chemotherapy and timely radical operation. Three combined chemotherapy of Streptomycin, PAS and INAH halts spread of the disease and suppresses further local infection. The appropriate time for surgery is determined when the mean Blood Sedimentation Rate is continuously less than 40 mms. with the dose of Streptomycin taken on the optimum regimen accumulated to 30 gms.

Radical operation in any bone and joint tuberculosis is performed by a direct approach to the focus. Generally the wide exposure of the focus, complete curettage of cavity, local administration of Streptomycin 1·0 mg. plugging of cavity by autogenous bone chips, and the primary closure followed, respectively.

Though direct approach to some vertebral bodies was considered to be very difficult, all the vertebral bodies have been reached easily. Thus, the approaches are antero-lateral approach to the cervical down to the second thoracic vertebrae; intra or extrapleural approach to the thoracic vertebrae; Fey's approach to the thoraco-lumbar vertebrae; and extraperitoneal approach to the lumbar and lumbosacral vertebrae.

As there have been no spondylitis tuberculosa in 1st and 2nd cervical vertebrae, I have no experience in trans-oral approach for this level of the spine.

For joint tuberculosis, direct approach is

performed. For example, Jinnaka's antero-lateral hook incision is for hip joint and Gaenslen's incision, for sacro-iliac joints.

For the spondylitis tuberculosa with kyphosis of high degree, not only local curettage and bone transplantation, but also spinal osteotomy for correction of kyphosis is followed later.

Our follow-up study on tuberculosis of bone and joint revealed satisfactory results. There is no reoperation in the strict sense except a few cases which required plastic closure of neglected sinuses.

I would like to conclude that tuberculous involvements of bone and joint are cured satisfactorily by the coordination of chemotherapy and primary radical operation except the cases of poor general condition such as cor-pulmonal disturbance.