International Ofloxacin Symposium – Closing Remarks

E.

Rubinstein

Chaim Sheba Medical Center, Tel Aviv University, Tel Hashomer, Israel

Prof. E. Rubinstein, Chaim Sheba Medical Center, Tel Aviv University, 52621 Tel Hashomer (Israel)

This symposium has touched three points that are currently in the focus of medical attention, namely drug therapy in the elderly, the care of the immunocompromised host and the cost benefit of antibiotic therapy. The elderly are the fastest growing segment in our population. In the developed world, every 10 years the average life span increases by 1 year. This segment of population – people over 70 years – consume two thirds of current medical resources. Infectious diseases in the elderly manifest themselves differently than in the younger population, antibiotic therapy of these infections is not yet established and the end points of therapy are not well defined.

Following the explanation of the mechanism of action of ofloxacin on bacteria and its relative absence of interaction with eucaryotic cells – delivered by Prof. J.T. Smith (UK) – Prof. M. Yamaoka (Japan) reported on the use of ofloxacin in elderly patients (mean age 82 years) with pneumonia – during therapy, he observed a slight improvement in several immunological parameters that accompanied the clinical improvement in these elderly patients. Prof. Yamaoka stressed the relative safety

of ofloxacin in the aged. Prof. H. Giama-rellou (Greece) treated elderly patients with urinary tract infections and with asymptomatic bacteriuria with 3 weeks of ofloxacin therapy (400 mg once daily) and found it to be safe and better tolerated than co-trimoxazole. Interestingly, no ofloxacin-resistant bacteria were isolated in the ofloxacin-treated patients.

These two papers suggest that ofloxacin therapy in the aged might be both effective and safe. It is clear, however, that a large body of information is required in order to ascertain the exact role of ofloxacin in the treatment of aged patients.

Prof. H. Sawada (Japan) reported on the use of ofloxacin in the prevention and therapy of bacterial infections in neutropenic patients with hematologic malignancies. The period of prophylaxis ranged from 7 to 156 days and was efficacious in 75.3% of the cases. This efficacy rate decreased with the length of the period of leukopenia and consequently with the amount of drug administered. Additional 17 episodes of infections were treated by the same authors in neutropenic patients with ofloxacin with an efficacy rate of 65%. Ofloxacin in all these patients was re-

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markably well tolerated with only minimal laboratory abnormalities. Prof. E. Gluckman (France) compared the regimens of ofloxacin 400 mg/day combined with amoxycillin 2 g/day (group I) with vancomycin 50 mg combined with tobramycin 50 mg and colistin 500,000 units all administered 9 times daily (group II). Clinical tolerance was good in both groups.

The mean number of days of fever and the mean number of days with parenteral antibiotics were lower in group I. Bacteremia was rarely observed in both groups but was mainly caused by *Staphylococcus epidermidis*. In group I, gram-positive bacteria could be isolated from many of the patients, while in group II gram-negative bacteria were isolated from the patients' feces. Prof. Gluckman concluded that oral absorbable antibiotics (ofloxacin and amoxycillin) provided better protection against bacterial infection than nonabsorbable antibiotics and stated that the threat of lethal bacterial infection in bone marrow transplant patients has been decreasing considerably. In a randomized open study, Prof. C. De Simone (Italy) treated 60 patients suffering from respiratory tract and urinary tract infections with either ofloxacin 300 mg b.i.d. or with co-trimoxazole. Results obtained with ofloxacin were better than those with co-trimoxazole. Of concern, however, was the development of resistance to ofloxacin of an *Escherichia coli* isolate from a patient with urinary tract infection as well as the development of resistance in a *Branhamella catarrhalis* respiratory isolate. Altogether however, more resistant strains were isolated from co-trimoxazole-treated patients.

Prof. L.E. Nicolle (Canada), in an attempt to evaluate the efficacy of ofloxacin in a chronic care facility, compared the results of ofloxacin therapy to those of standard therapy in institutionalized elderly patients with a mean age of 84 ± 8 years who were receiving a multitude of concurrent medications. The patients randomized to receive ofloxacin had significantly better therapeutic results than the patients receiving standard therapy.

Nineteen of their 22 chronic care facility patients who had an adequate follow-up were cured or improved, and in 17 of 18 patients the pretherapy bacterial isolates were eradicated. Eight of their patients experienced adverse side effects, but only 1 patient required drug discontinuation. Prof. Nicolle's results are of particular importance due to the increasing use of antibiotics in the elderly – an age group for which little information is available – and due to the current view that this geriatric population is better treated at their local chronic care facility rather than be removed to an acute care hospital to which these old people frequently ill adjust and with which medical costs soar with only little justification.

Prof. A. Sato (Japan) described the use of ofloxacin in patients with diffuse pan-bronchiolitis – a disease entity characterized by a chronic inflammatory process of the small bronchioli caused by gram-negative bacteria.

In all their 18 cases followed-up for a 4-year period, they noticed an improvement in hypoxemia and an increase in the lung's vital capacity that were accompanied by a clinical improvement substantiated by a decrease in exacerbations re-

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quiring hospitalizations and associated medical costs.

Prof. T. Matsumoto (Japan) reported that the results of treatment of urinary tract infections with a single dose of aminoglycoside followed by oral ofloxacin therapy suggested that a slight advantage over therapy with ofloxacin alone may be obtained, owing to a shortened treatment period, and therefore a greater cost benefit.

In conclusion the ease and high efficacy of ofloxacin therapy open new fields for the use of oral antibiotics in severe infections in the immunocompromised host and in elderly patients. The initial results

presented in this symposium call for in-depth studies of these clinically important issues. The relevance of these issues is based on the increase in number of immunosuppressed and of

geriatric patients, both of which impose a burden on the shrinking available medical resources. Quinolones in general and ofloxacin in particular may provide some remedy to these important issues.