Two observations are worthy of special remark. All the patients who did well showed improvement within seven days of starting propranolol. Two patients (Nos. 4 and 12) who improved relapsed again within a few days of stopping propranolol; and No. 4 improved when propranolol was resumed, relapsed when it was stopped, and recovered again on its further resumption. But he was having 300 mg a day of chlorpromazine as well. The case therefore is not proved, but it deserves further study.

[1] Granville-Grossman, K., *British Journal of Clinical Pharmacology*, 1974, 1, 361.

Septicaemia on the Increase

The immense main auditorium of the Palacio de Congresos in Madrid was the scene on November 4-5 of an international symposium on septicaemia, organized by Antibioticos S.A.

Outstanding among papers on individual subjects was that by E. L. Quinn of Detroit on bacterial endocarditis. His experience had been that *Streptococcus viridans* infections, which had formerly accounted for 80% of cases, were now found in only 40%, their place having been taken by generally more resistant infections. Not all of these were even bacterial, *Candida* spp. being one exception, and many were self-introduced by heroin addicts.

Five main sessions were devoted to themes concerned with modes of origin of bloodstream infections: operative surgery and obstetrics, urology, the neonatal period, respiratory tract infections, and Gram-negative shock. It was evident from the treatment of the last subject that there may be much more to its treatment than the urgent administration of an antibiotic such as gentamicin calculated to kill enterobacteria in the blood. Such a patient may need several intravenous "lines" to monitor the blood pressure in the remotest depths of his circulation and to administer fluids, a catheter in his bladder to monitor urine output, and even a tube in his trachea to assist respiration.

Maxwell Finland of Boston, who chaired this session, was an author of a classical paper[1] 15 years ago to the effect that bloodstream infections had actually increased in frequency during the antibiotic era and were much more often caused by Gram-negative organisims. This change has not only continued but apparently accelerated since then, at least in the U.S.A.; during the 1960s the frequency of Gram-negative bacteraemia per 1,000 admissions rose from 0·7 to 2·5 in Cincinnati,[2] from 0·7 to 4·0 in Palo Alto,[3] and from 4·9 to 8·1 in Minneapolis.[4]

Such findings were repeatedly re-echoed and extended on this occasion; speakers at most sessions produced lists of causative organisms headed by *Esch. coli*, *Proteus*, *Klebsiella*, and *Pseudomonas*, and including some formerly almost unheard-of genera, among which *Serratia* usually figured prominently. (Needless to say Gram-positive infections, staphylococcal, streptococcal and other, also still occur.) It may well be asked why serious generalized infections by such organisms as these should apparently be increasingly common. These bacteria owe much to their antibiotic multi-resistance, and the selective effect of indiscriminate antibiotic treatment is often to blame for giving them their chance. But the main cause lies deeper, and paradoxically enough is inherent in various therapeutic advances. The intravenous tubes now so commonly used are a convenient portal of entry for these infections. Immunosuppressive drugs, without which organ transplants are impossible, also inevitably depress resistance to infection. So also do cytotoxic drugs given in leukaemia and cancer. So may corticosteroids given for a variety of reasons. More adventurous surgery must also take a share of the blame. Another important factor is age; more and more old people are receiving radical treatment which used formerly not to be attempted, and their resistance to infection is poor.

These difficulties must be accepted, but there is perhaps one direction in which remedial action should be possible. Most of these infections are acquired in hospital, and are due to identifiable resident strains of drug-resistant bacteria which continue to attack patient after patient for months. When catheters and cystoscopes were being "disinfected" by ineffective methods this kind of infection was inevitable, but now that sterilization is generally efficient such obvious routes for the implantation of bacteria in patients are excluded. Though much has been done, is there not room for further study of the habitat and distribution of these bacteria in hospital wards and of their means of access to the patient? This should be a simple problem of environmental hygiene, capable of amelioration if not full solution by physical and chemical methods of disinfection. Total elimination would be defeated by intestinal carriers, but there should be a long and hazardous path for the bacteria to tread between the anus of one patient and the wound of another. We are told that bacteria are endlessly adaptable and have outsmarted us in many ways, but surely they cannot withstand well-planned outright war in a simple extracorporeal environment?

[1] Finland, M., Jones, W. F. Jr., and Barnes, M. W., *Journal of the American Medical Association*, 1959, 170, 2,188.
[2] Altemeier, W. A., Todd, J. C., and Inge, W. W., *Annals of Surgery*, 1967 166, 530.
[3] Fried, M. A., and Vosti, K. L., *Annals of Internal Medicine*, 1968, 121, 418.
[4] Du Pont, H. L., and Spink, W. W., *Medicine*, 1969, 48, 307.

Nail Growth

Few people realize how slowly nails grow. There have been a number of serious attempts to record accurately the rate of nail growth, but undoubtedly the longest period of observation has been that of Bean on his own left thumb nail: his latest report[1] records 30 years of continuous observation.

Like other observers Bean has noted a gradual slowing with age. Whereas in the early days it took 116 days for the nail to grow from cuticle to tip (a distance of 1·45 cm) it now takes 148 days—a reduction in growth rate from 0·125 mm a day to 0·1 mm a day 30 years later. Unlike other observers, he has noted no seasonal change in growth rate, but this he attributes to living in a centrally-heated atmosphere during the winter and in air conditioning during the summer, so there have been no extremes of heat or cold. His detailed chart shows a number of occasions when the rate of growth has been reduced materially for a short period. One of these was in association with an attack of mumps, and two others appear to be related to a visit to England and Europe in 1964 and to Ireland, Scotland, and England in 1971.

Infections and especially measles in children[2] slow the rate of nail growth. In extreme cases the slowing results in the formation of a depression on the surface of all nails, which becomes visible at the cuticle several days after the illness and then moves forward at the normal rate. Slowing may also occur

with other general medical disorders such as coronary thrombosis and occurs also in the nails of a paralysed limb.[3] In nail biters the nails grow appreciably faster than the average.[4]

Bean's observations have been confined to a single nail of one individual and must not therefore be taken as a true record of nail growth. To obtain population statistics measurements of nails from many persons of different ages are needed, when wide variations are found in otherwise normal people. Hillman's figures[5] from 300 individuals show a range in growth rate from 0·07 to 0·17 mm a day. Dawber[6] has shown that there is a small difference in the rate of growth of individual fingers. In general the middle finger nails grow faster than the index and ring finger nails, and these in turn grow faster than those of the thumb and little finger—in other words the longer the finger the faster the growth of the nail. Dawber's results confirmed earlier observations by Le Gros Clark and Buxton.[4] Toe nails undoubtedly grow more slowly than finger nails, but no accurate readings have been made, largely because the shape of toe nails makes accurate measurements difficult to obtain. It is usually said that toe nails grow at one third to one half the rate of the finger nails.[7]

[1] Bean, W. B., *Archives of Internal Medicine*, 1974, **134**, 497.
[2] Sibinga, M. S., *Pediatrics*, 1959, **24**, 225.
[3] Head, H., and Sherren, J., *Brain*, 1908, **28**, 263.
[4] Le Gros Clark, W. E., and Buxton, L. H. D., *British Journal of Dermatology*, 1938, **50**, 221.
[5] Hillman, R. W., *Human Biology*, 1955, **27**, 274.
[6] Dawber, R., *British Journal of Dermatology*, 1970, **82**, 454.
[7] Samman, P. D., *The Nails in Disease*, 2nd edn. London, Heinemann Medical Books, 1972.

Discussions Extended

Consultants have dislodged the Government from its opening positions in the contract negotiations. The sharp reaction by senior hospital staff (23 November, p. 482) to the Health Departments' November proposals for a new consultant pay structure (16 November, p. 421) has persuaded Dr. David Owen, chairman of the Joint Working Party, to think again. The Government must now realize that its intention to weight a new contract heavily in favour of whole-time N.H.S. practice is unacceptable to most doctors (16 November, p. 363).

By 5 December, after the profession's three-week deadline had expired (16 November, p. 416), the Government had not put any formal revised proposals to the staff side of the working party. Nevertheless, a detailed interim report from its representatives (see p. 667) convinced the Central Committee for Hospital Medical Services that sufficient progress had been made to extend to mid-January the discussions for agreeing in principle an acceptable contract (p. 669). The tenor of the committee's debate showed that this decision to give more time stemmed from the confidence members had in their case and in the determined support they were receiving from the profession as a whole. So the B.M.A.'s sanctions plan (9 November, p. 357)—about which N.H.S. doctors had their first "warning circular" last week—will be put on ice for the time being.

The working party's discussions have centred almost entirely on contracts. The C.C.H.M.S. supported its negotiators' plea to keep the contract discussions—in their view the vital issue—separate from the future of pay beds, which in any case is only one aspect of independent practice. Any idea of a package deal is a non-starter. Members wanted private practice facilities in the N.H.S. retained and were prepared to defend them within the bounds of the law.

Existing holders of whole-time contracts may have been attracted by prospects of immediate financial benefit implicit in the Goverment's original offer—as no doubt Mrs. Barbara Castle had hoped. If, however, every consultant were paid "a decent, living wage," as one speaker succinctly put it, then what he does outside his contracted hours should be his own affair. Fortunately, the Government has now accepted that all consultants should be offered the opportunity to sign a 10-session contract. The C.C.H.M.S.'s determined backing of their representatives on this major principle has been reinforced by the results of a recent B.M.A. questionnaire to senior hospital staff (7 December, p. 608). This showed that nearly half the respondents (and the response rate was gratifyingly high) wanted a 10-session defined contract. This contrasted with a fifth of senior staff who wanted the present whole-time contract, and slightly fewer who supported the present part-time one. An item-of-service contract, about which the Government has now agreed to set up an independent inquiry, attracted support from only 14%.

There are still outstanding differences between the two sides. The Government seems still to be wedded to the idea of some form of "complete commitment" allowance for the future "whole-timer" and it wants part of any transmuted merit award scheme to be available to that group alone. The staff side members—the B.M.A. and the Hospital Consultants and Specialists Association together with representatives of the British Dental Association and Joint Consultants Committee have acted together throughout these exhaustive discussions—are equally determined that any pay should be for work done and not in recognition of some ill-defined whole-time commitment to the Service.

What is essential is a well-paid basic contract for all consultants. Dr. Brian Lewis, now acting chairman of the C.C.H.M.S.'s negotiating subcommittee, aptly summed up the negotiators' objective by calling for a "Christmas tree of a contract which has a good solid trunk." The decorations, while attractive, should not, he argued, overbalance it. Let us wish the negotiators a merry Christmas cultivating this tree.

[1] *British Medical Journal*, 1974, **2**, 513.