By an elaborate series of absorptions and elutions he has shown that the rheumatoid factor is most probably an antibody against denatured human gamma globulin. As with most antibodies, its ability to cross-react with similar proteins of other species is a function of the avidity of the antibody for its antigen. Consequently, absorption of rheumatoid sera by appropriately treated human gamma globulin removes all the rheumatoid factor activity, as detected by any test, whereas absorption by appropriately denatured rabbit gamma globulin only removes the cross-reacting antibodies—i.e., those of high avidity—and leaves behind the more specifically anti-human antibodies, so that they are still detectable by human gamma-globulin reactants such as participate in the latex or streptococcal tests.

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1 *Abstr. Wld Med.*, 1961, **30**, 142.
2 Seifert, H. Z., *Rheumaforsch.*, 1960, **20**, 26.
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5 Aho, K., *Ann. Med. exp. Fenn.*, 1961, **39**, Suppl. 7.

Risk of Further Malformed Children

Q.—*A woman aged 30 had a miscarriage in 1955, an anencephalic monster (stillborn) in 1956, and a child with spina bifida and hydrocephalus in 1957. There is no history of any abnormalities in her parents' or husband's parents' sibs or children, and her brother and his brothers have normal children. She is also Rh negative without antibodies. What are the chances of another abnormal child?*

A.—The risk after one child with a major central nervous system malformation of the anencephaly/spina bifida cystica group is about 1 in 25.[1] From a personal series the risk after two such children, as is the case here, appears to be of the order of 1 in 8. The fact that the patient is rhesus-negative is not relevant to the risks.

REFERENCE

1 Record, R. G., and McKeown, T., *Brit. J. soc. Med.*, 1950, **4**, 217.

Therapeutic Value of Dihydrostreptomycin

Q.—*As it has been established now that chronic toxic symptoms occur with dihydrostreptomycin because of its selective neurotoxic action on the vestibular nerve, and the damage may be permanent, I would like to know what exactly is its therapeutic value in (1) Gram-negative infections, when used alone as short-term therapy; (2) tuberculosis, when used in combination with streptomycin in equal amounts for a prolonged period; (3) mixed infections, when used with penicillin for five to seven days; (4) Gram-negative infections when used with sulphonamides. Have there been any controlled trials on a large scale to evaluate the position of dihydrostreptomycin alone and in the above combinations?*

A.—It should first be made clear that the toxic action of dihydrostreptomycin is predominantly on the auditory branch of the eighth nerve, and that of streptomycin on the vestibular. Because deafness is a greater disability than vertigo and ataxia, and may come on without warning long after the course of treatment is over, it is now widely believed that dihydrostreptomycin should not be prescribed at all. The hope that the risk of damage to either branch can be minimized by administering equal amounts of the two forms of the antibiotic has not been fulfilled. Shambaugh *et al.*,[1] reporting 32 cases of loss of hearing caused by dihydrostreptomycin, of which 18 patients had had a total dose not exceeding 10 g., roundly condemn proprietary antibiotic mixtures in which these two forms have been included because of the supposed harmlessness of the combination. The risk of toxic effects is much greater in a patient with any impairment of renal function, since delayed excretion rapidly leads to the attainment of a dangerously high blood level.

The form used for the treatment of tuberculosis, or indeed for any other purpose, should therefore be streptomycin alone. Opinions differ on what other indications justify its use. Examples in categories (1), (3), and (4) referred to in the question are: in (1) urinary-tract infections due to demonstrably sensitive bacteria; in (3) peritonitis or mixed respiratory tract infections, but a tetracycline is often preferable; in (4) by oral administration (which is harmless) for intestinal infections. "Controlled trials on a large scale" are exceedingly difficult to organize and have certainly not been made recently to evaluate any of these forms of treatment.

REFERENCE

1 Shambaugh, G. E., *et al.*, *J. Amer. med. Ass.*, 1959, **170**, 1657.

NOTES AND COMMENTS

Alopecia in Young Women.—Dr. F. F. HELLIER (Leeds General Infirmary) writes: While I agree with your expert ("Any Questions?" December 16, p. 1659) that alopecia seems to be more common nowadays in youngish women I cannot agree that it resembles that seen after the menopause or due to an endocrine imbalance. The most obvious area of hair-loss is further forward midway between the vertex and the anterior hair line and not over the vertex, where it is most marked in post-menopausal thinning. In my experience the most probable common factor in these women is traction from curlers which are applied tightly at night. Lipnik[1] reported the condition in 13 women using "brush rollers" and all but two showed slow recovery when these were abandoned.

OUR EXPERT replies: I entirely agree with Dr. Hellier's observation that traction alopecia from the use of curlers is not very uncommon and that it presents the features Dr. Hellier describes. The type of case to which I was referring, however, is one in which there is not only a loss of hair but a change in the quality of the hair and in apparent greasiness or dryness of the scalp. These are cases in which curlers of any kind have been excluded as a possible cause.

REFERENCES

1 Lipnik, M. J., *Arch. Derm.*, 1961, **84**, 493.

Corrections.—According to the *Annual Report of the Ministry of Health for 1959*, Part II, a cobalt source was first used in this country for telecurietherapy at University College Hospital, London, in 1950, when a 6-curie cobalt-60 source was substituted for a 10-gram radium source. In an answer to a question ("Any Questions?" December 9, p. 1588) the date of installation of the first unit in this country (at Mount Vernon Hospital, Northwood) was given as September, 1953.

In Table 8 of the paper entitled "Admission of Elderly People to Hospital," by Mr. R. W. Halsall and Dr. W. H. Lloyd (December 30, 1961, p. 1768), the percentages printed under Medical Groups III, IV, and V should have been 3.9, 2.7, and 2.7 (not 39, 27, and 27). In the paragraph of the "Discussion" headed "2. *Type of Illness Suffered by Patient*" the percentage of the social group judged to suffer from diseases of the cerebrovascular system should read 44%, not 62%.

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