

Indian Medical Gazette

APRIL

LUMBAGO, SCIATICA, ETC.

THESE annoying affections have been traced to a protrusion of the intervertebral discs. The lesion has been demonstrated by open operation and sometime even by x-rays (showing a narrowed disc space). A recent report on a survey of fairly long series sums up the situation as follows :

Findings in 913 cases of lumbago and sciatica at operation

Protrusion	750
Lesions without a protrusion	82
Osteo-arthritis and root irritation	22
Abscess	3
Tumours	2
Peridural adhesions	12
Negative explorations	42
	913

Results of operation on 616 cases of protruded discs

No pain or disability	349	72.5 per cent
Occasional pain	98	
Improved	125	20.3 per cent
Failures	44	7.2 per cent

(Burns and Young, 1951.)

During the first half of this year these affections have attracted attention in Calcutta. All ages beyond the school age have been affected. The pain appearing suddenly, and thus believed to be due to a muscular strain or assumption of an unusual posture, lasted days or weeks and inflicted disabilities of various degrees.

Usually the lower part of the back or legs have been affected, but in some cases the lower part of the neck, shoulders or arms have been affected.

A worker interested in the affection reports a similar increase in its incidence from Agra (Laha, 1951, personal communication).

The daily press in England, during the same period, reported an overwhelming increase in the affections, suggestive of an epidemic. As 'a matter of great astonishment' hundreds of letters from unrelieved sufferers from lumbago and sciatica were received *in one day* in the office of a newspaper. The newspaper had advocated the inclusion of osteopathy and allied

systems in the scheme of the English Health Service. The unrelieved sufferers were enquiring when and where the relief could be had (Daily Press, 1951).

An association with the new Scandinavian influenza epidemic suggests itself. The epidemic appeared in England in full swing in the first half of the year. During the same period Calcutta had in it for a month or so a Scandinavian touring company, Ice Revue, giving performances of skating on ice, etc. As epidemics travel as fast as man they can nowadays be imported from anywhere in a day or so; the touring company, however, might have brought with them the pure strain of the virus. The virus has now been ascertained to be Virus Type A-prime (Medical News, 1951).

The association between an inflammation or oedema of the discs and a consequent protrusion suggests itself. Otherwise, an epidemic of protrusions responsible for 'a matter of great astonishment' is not conceivable.

Inflammations or oedemas causing joint or muscular pains have been recently brought together under 'collagen diseases' for which substance E, substance F or ACTH of the pituitary gland have been proved to be specific (Kersley, 1950).

The substance E, being prohibitive in price, because of a highly complicated process of manufacture, has been used only experimentally. Lately reports of an easier method of preparation have appeared (The American Chemical Society, 1951; Current Topics in this issue of the *Journal*, p. 178). ACTH is available in blood transfusion from a pregnant woman donor (Greval, 1951).

Substances E, F and ACTH are derived from the animal kingdom; the possibility of the substance E being prepared from the vegetable kingdom, strophanthus seeds and yams, makes the situation still more hopeful (Editorial, 1950). Lately a doubt or a mystery has unfocused the attention on strophanthus.

In the animal tissue *versus* herbs, for the treatment of collagen diseases, the herbs will win until they are overpowered by synthetic chemistry. The latter offers greater variation in the composition of the product than the herbs to suit the various forms of the collagen disease.

Yams, incidentally, are articles of diet and their use as suppressors of rheumatics is worth attempting. Besides, they are cheap articles of diet, mostly consumed by the poorer classes in India at present.

REFERENCES

- BURNS, B. H., and YOUNG, R. H. (1951). *The Lancet*, 3rd February, p. 245.
- DAILY PRESS (1951) .. *The Daily Mirror*, London, Thursday, 8th March, col. 4, p. 2.
- EDITORIAL (1950) .. *Indian Med. Gaz.*, 85, 159.

- GREVAL, S. D. S. (1951). Blood Groups, Blood Types, Rh, Hr, etc. For Clinical, Forensic and Anthropological Purposes. Thacker's Press and Directories, Ltd., Calcutta.
- KERSLEY, G. D. (1950) .. The Rheumatic Diseases, London, William Heine-mann Medical Books Ltd.
- LAHA, P. N. (1951) .. Personal communication.
- MEDICAL NEWS (1951) .. *Indian Med. Gaz.*, **86**, 110.
- THE AMERICAN CHEMICAL SOCIETY (1951). Newsletter, Wa-365, January, p. 2.

CHLOROMYCETIN

INITIALLY employed in the treatment of rickettsial diseases four years back, chloromycetin has come out as a versatile antibiotic effective over a wide range of microbial infection. Ever broadening usage of this drug is still being explored and the full account of its activity will naturally be deferred pending collection of further evidences. Of particular interest, however, is its action against salmonella group of organism, and against almost all types of rickettsia and a section of virus like that of primary atypical pneumonia, herpes zoster and psittacosis—*Lymphogranuloma inguinale* group.

This potent antibiotic was isolated from the culture filtrate of an actinomycete, from a soil sample from Caracas, Venezuela by Ehrlich and his associates in 1947. It was shortly afterwards isolated in crystalline form by Bartz in 1948, and it has got the unique privilege of being synthesized by commercial method (Controulis *et al.*, 1949).

Laboratory investigation has proved its effectiveness against most of the gram-positive and gram-negative organisms, with notable exceptions of mycobacterium and clostridia groups. However, it is more effective in gram-negative bacteria. It is ineffective against actinomycetes, fungi, protozoa and yeast. Its effect against syphilis is doubtful.

Clinical trial in acute and chronic bronchopulmonary infections, infections of the urinary tracts, common surgical wounds and peritonitis, brucellosis, tularemia, whooping cough and against some strain of proteus infection, was encouraging. Infection with *Ps. pyocyanea* is absolutely resistant to this drug.

Most impressive result of chloromycetin is obtained in the treatment of typhoid fever which was incidentally observed by Woodward *et al.* (1948) in Malaya, while trying this drug in scrub typhus. Successful result of chloromycetin consistently encountered in typhoid fever has led to its universal use and has revolutionized the treatment of this fell disease, where the physician used to be a helpless spectator throughout the whole course of illness. Like streptomycin in tuberculosis chloromycetin in typhoid group of fevers is an absolute indica-

tion, a distinction hitherto not obtained by any other major antibiotic.

Chloromycetin is effective per orally and is rapidly absorbed from the gut. Optimum concentration in the blood after a therapeutic dose remains for about 4 to 6 hours only. It passes easily the placental and brain barriers. It also pervades the body fluid like pleural and peritoneal exudates. It is poorly excreted in the bile. In infants and children it appears to be effective when given rectally in higher dosage.

Within the therapeutic limits chloromycetin is innocuous. Occasional side-reactions are nausea, vomiting, headache, skin eruption and enteritic symptoms. Rarely after prolonged use untoward effects like glossitis, cheilitis, dysphagia and heartburn are encountered. Severe reversible granulopenia and bone marrow depression may occur in some cases (Volini *et al.*, 1950). In one case agranulocytosis has been reported.

The mode of action of chloromycetin is not definitely known. Probably it is a bacteriostatic agent. Smith *et al.* (1949) suggested that it inhibits the esterase system of enzyme present in the bacteria. Resistant strains due to habituation of the bacteria are not likely to impair the usefulness of this drug.

Versatile as the action of chloromycetin on the microbial world is the effective dose also varies in different diseases. In general it can be said that 50 mg. per kg.* of body weight per day in divided doses, until the signs and symptoms of the disease are controlled, is the optimum dose in most of the cases. Afterwards at a reduced dose it may be continued for few more days. In children the dose is usually slightly higher (75 to 100 mg. per kg. of body weight) and well tolerated. In chronic pulmonary infection, infection of the urinary tract and in gonorrhoea much smaller dose is effective.

In typhoid fever the consensus of opinion emerging from the accumulated evidences is that an initial loading dose of 50 mg. per kg. of body weight should be followed by 2.5 to 3.0 gm. of the drug daily till the temperature subsides.† The defervescence usually ensues within 2 to 3 days but the drug should be continued for about 10 days or more with gradually reduced doses. Relapses (usually relieved by re-treatment) are not uncommon and in 66 consecutive cases they were found to be about 16 per cent. As high as 50 per cent relapses have also been reported. Smadel emphasized continuation of the drug in 3 gm. daily doses for 10 to 14 days to prevent relapse. Frequent positive stool culture and development of carrier state even after full treatment are disquieting features. In chronic carriers with or without infection of gall-bladder this drug is of little avail. Some

* A kg., kilogram or kilo is a little over 2 lb. (2 1/5 lb.) or roughly a seer.

† An allowance of 30 gm. per case should be made, not counting relapses.